

WATER AND POWER

55TH ANNUAL REPORT

fiscal year ending June 30, 1956



BOARD OF WATER AND POWER COMMISSIONERS • CITY OF LOS ANGELES

DEPARTMENT
OF
WATER
AND POWER

WILLIAM S. PETERSON
GENERAL MANAGER
AND CHIEF ENGINEER
BURTON S. GRANT
ASSISTANT GENERAL MANAGER
AND CHIEF ENGINEER
FRANK TWOHY
CONTROLLER



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ROBERT A. HEFFNER
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JOSEPH L. WILLIAMS, SECRETARY



NORRIS POULSON
Mayor of Los Angeles

Honorable Norris Poulson, Mayor
Honorable Members, City Council
City of Los Angeles, California

Gentlemen:

We are pleased to transmit herewith in accordance with the provisions of Article IV, Section 64, of the Los Angeles City Charter the 55th Annual Report of the Board of Water and Power Commissioners for the fiscal year ending June 30, 1956.

The report covers another year of substantial progress of the Department of Water and Power not only in keeping pace with the remarkable growth and development of the City of Los Angeles but in keeping ahead of requirements for water and electricity.

The citizen-owner-customers of this, the largest municipally owned utility in the nation, can take pride in this record of accomplishment. In spite of the unprecedented growth in demand for water and electricity, these services have been provided on time and at very low cost to users. All financial obligations have been met and the Department has continued to be self-sustaining, imposing no financial burden upon the taxpayers.

The Board expresses its sincere appreciation for the cooperation which has been extended by the Mayor and City Council, the other elective officials of the city, and the Boards and Commissions and managers of other city departments. The effective services of the management and personnel of the Department of Water and Power throughout the year are gratefully acknowledged.

Respectfully submitted,

J. C. Moller, Jr.
J. C. Moller, Jr., President
Board of Water and Power Commissioners

LOS ANGELES
CITY
COUNCIL

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President, City Council

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First District

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Second District

ROBERT M. WILKINSON
Third District

HAROLD A. HENRY
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Fifth District

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Ninth District

CHARLES NAVARRO**
Tenth District

HAROLD HARBY
Eleventh District

RANSOM M. CALLICOTT
Twelfth District

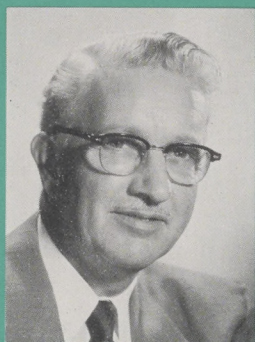
ERNEST E. DEBS
Thirteenth District

JOHN C. HOLLAND
Fourteenth District

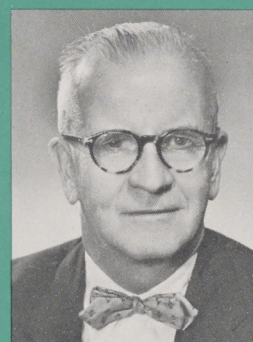
**Chairman —
*Member
City Council's
Water and Power Committee

*Appointment effective
September 24, 1956
succeeding Ben P. Griffith.

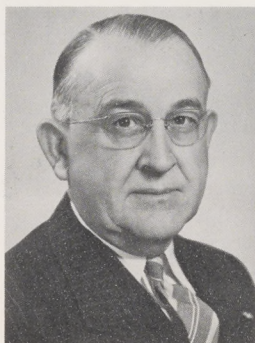
BOARD OF
WATER AND POWER
COMMISSIONERS



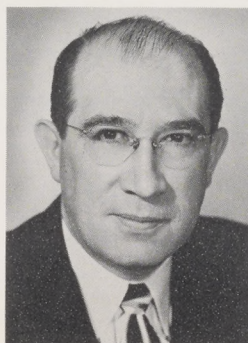
J. C. MOLLER, JR.
President



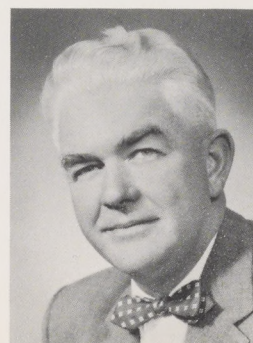
WILLIAM B. HIMROD
Vice President



ROBERT A. HEFFNER



W. BALLENTINE HENLEY



WILLIAM A. SIMPSON, JR.*

SAMUEL B. NELSON
Chief Engineer of Water
Works and Assistant Manager

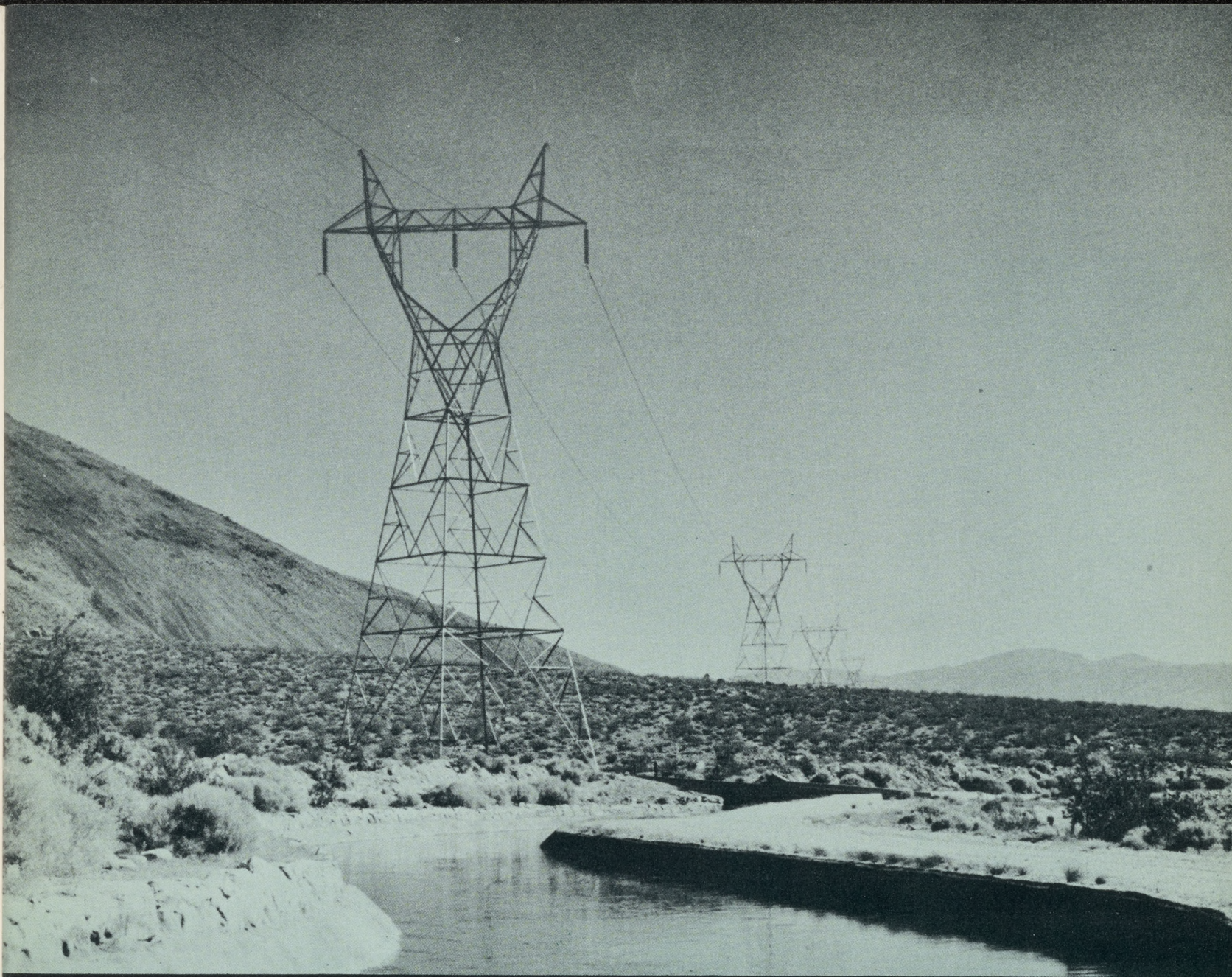
IVAN L. BATEMAN
Chief Electrical Engineer
and Assistant Manager

FRANK TWOHY
Controller

GEORGE C. SOPP
Joint System Head
and Assistant Manager

GILMORE TILLMAN
Chief Assistant City Attorney
for Water and Power

JOSEPH L. WILLIAMS
Secretary, Board of
Water and Power Commissioners



WATER AND POWER 55TH ANNUAL REPORT

Fiscal year ending June 30, 1956

Board of Water and Power Commissioners

City of Los Angeles

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HIGHLIGHTS OF THE YEAR

SERVICE

Water Sales	132 billion gallons
Water Customers (Average for the year)	522,929
Power Sales	5.4 billion kilowatt hours
Power Customers (Average for the year)	829,058

FINANCIAL

What We Received

Total income from sales of water and electricity, and other sources incidental to operating the business

How It Was Used

For operation of water and electric systems

For paying interest and expenses on bonds and other debt

To provide for depreciation

[Net income (amount left after subtracting above 3 items from total income)

For transfer from net income to general and reserve funds of the City of Los Angeles

Remainder of net income available for retirement of bonds and to pay part of cost of additions, extensions and improvements

How We Stand

Total assets, including what we own and what is owed us, less accumulated depreciation

Less what we owe others in the form of bonds or other funded debt

Less miscellaneous liabilities

Leaves the people of Los Angeles an equity reinvested in the business of

CONSTRUCTION

Additions, extensions, and improvements, fiscal year, 1955-56

Additions, extensions, and improvements, ten-year period, 1946-1956

	<i>Water</i>	<i>Power</i>	<i>Total</i>
	\$ 28,985,079	\$ 80,917,466	\$109,902,545
	\$ 15,132,285	\$ 51,110,600	\$ 66,242,885
	2,354,407	4,939,435	7,293,842
	5,667,787	11,976,980	17,644,767
	\$ 5,830,600	\$ 12,890,451	\$ 18,721,051
	1,208,000	3,432,000	4,640,000
	\$ 4,622,600	\$ 9,458,451	\$ 14,081,051
	\$249,603,793	\$513,587,470	\$763,191,263
	88,199,000	241,911,430	330,110,430
	6,063,411	15,265,921	21,329,332
	\$155,341,382	\$256,410,119	\$411,751,501
	\$ 17,589,168	\$ 46,331,632	\$ 63,920,800
	\$142,000,000	\$377,000,000	\$519,000,000

A REPORT

By The General Manager



William S. Peterson

General Manager and Chief Engineer

To the Honorable Board of Water and Power Commissioners:

To meet rapidly increasing demands for water and electricity in fast-growing Los Angeles required intensified efforts in the fiscal year ending June 30, 1956. The Department of Water and Power met all needs on time, and carried on a large program of construction to serve future requirements.

A special United States census of the City of Los Angeles as of February 25, 1956, showed a population of 2,243,901, a gain of 139,238 since the previous special U.S. Census of September 26, 1953. At this rate, in ten years Los Angeles will add 576,000 persons, about the population of Minneapolis. Los Angeles' estimated population on June 30, 1956 was 2,266,000.

Rapid growth during the year was also indicated by the addition of over 21,000 new dwelling units and the investment of over \$117,000,000 in new and expanded industries.

DEPARTMENT GROWTH At the end of the year, there were 528,823 water customers, an increase of 13,731 over the previous year, and 836,913 power customers, an increase of 23,313. Use of water and electricity both showed substantial increases.

Supplies of water and electricity were ample to meet the greater demands. Augmenting water being used at about capacity from local sources and the city-owned Owens River Aqueduct, increased use was made of Los Angeles' share from the Colorado River Aqueduct. Balancing a reduction in hydroelectric power received from Hoover Dam and also providing for the city's increased electric needs, production at steam electric generating plants was greatly increased.

FINANCIAL: For the fiscal year, total income of the Water System was \$28,985,079; for the Power System, \$80,917,466. After operating expenses, including taxes on property outside the city, and interest and depreciation, the Water System's net income was \$5,830,600, and the Power System's net income was \$12,890,451.

From Water net income, the Department transferred \$1,208,000, and from Power net income, \$3,432,000 to the city's general and reserve funds. The remainder was used by both systems to retire outstanding bonds and to pay part of the cost of constructing new water and electric facilities.

The Department continued to be entirely self-supporting. Current revenues met all operating costs and part of the large investments in construction, with the remainder financed by the sale of revenue bonds to be paid out of future revenues.

RATES: Water System rates, established in 1954, were adequate to meet financial requirements. However, Power System rates, unchanged since 1947 when they were lowered for the twelfth successive time, required upward adjustment to meet higher operating costs and help finance the huge electric construction program. Establishment of higher electric rates was in process at the end of the fiscal year. These rates will increase power revenues 5.9% or \$4,800,000 the first year.

Water rates of the Department remained lower than those of other California cities which import their water from a distance. Electric rates, even with the increase, will continue to be lowest among the sixteen largest U.S. cities.

NEW CONSTRUCTION: The Department invested \$17,589,168 in construction of water works, \$46,331,632 in power facilities during the year. The \$9½ million Eagle Rock-Hollywood Conduit, the city's major connection with the Colorado River Aqueduct supply, was completed. The third and fourth generating units of the new \$81,000,000 Valley Steam Plant were placed in service. Other important projects were completed or under construction.

PLANNING FOR THE FUTURE:

Continued capacity use of local sources and the Owens River Aqueduct, and increasing use of Colorado River Aqueduct water will supply growth requirements of the city for approximately fifteen years ahead, as long as California's rights in the Colorado River are preserved. For the longer range future, Los Angeles is working with other communities and water agencies in support of the \$1½ billion State-planned Feather River Project which contemplates delivery of 1,773,000 acre feet annually to southern California, including Los Angeles. The city's in-town system of water storage and distribution is currently being expanded under a five-year \$85,000,000 construction program.

To meet Los Angeles' power requirements, which are more than doubling in the current ten-year period, a five-year \$260,000,000 electric facilities construction program is in progress. Work has started on the huge new Scattergood Steam Plant, and the first two turbine-generating units totaling 312,500 kilowatts, with their associated boilers and other equipment are on order. The plant's ultimate generating capacity will be over 1,200,000 kilowatts. The Haynes steam generating plant is being planned with even larger capacity.


Additional hydroelectric energy may be anticipated in the future when normal water conditions return at Hoover Dam, and may also become available through future federal power developments along the Colorado River. The Department is keeping in close touch with atomic power advancements and training key personnel for future use of nuclear power reactors when economically practical.

ACKNOWLEDGMENT: The leadership of the Board of Water and Power Commissioners, continued support of Los Angeles citizens and their elective officers, and the cooperation of other offices of the general city government are gratefully acknowledged. To the executive staff and the more than 11,000 employees of the Department of Water and Power, sincere thanks are tendered for their loyalty, devotion to duty, and high standards of performance.

Respectfully submitted,

A handwritten signature in dark ink, reading "Wm. S. Peterson".

GENERAL MANAGER AND CHIEF ENGINEER



WATER SYSTEM

ACCOMPLISHMENTS 1955-56



SAMUEL B. NELSON
Chief Engineer of Water
Works and Assistant Manager

The rapid increase in the use of water with resulting strains upon municipal water supplies in communities throughout the country has focused national attention upon the importance of ample water. Los Angeles' experience in providing water to keep pace with a growth of population and industry exceeding that of all other U.S. cities has extended over many years, and has encompassed the successful solution of problems of the greatest magnitude.

The City of Los Angeles is located in the semi-arid southern half of California, which has less than 2% of the state's natural water supplies. The city consequently must import three-fourths of its water from distant sources. It must maintain sufficient water stored in reservoirs — actually, almost a year's supply — to assure full dependability of water service under any conditions of emergency which can be anticipated. In addition, it must distribute water to the nation's largest city in area — 454 square miles — and in numerous service zones ranging all the way from sea level to hilltops and mountain slopes up to 2340 feet in elevation.

These are some of the continuous challenges that are faced year by year by the Water System of the Department of Water and Power and which were successfully met in the 1955-56 fiscal year. Ample water to meet all of Los Angeles' requirements was provided on time wherever needed in 1955-56 as in previous years.

INCREASE IN WATER CONSUMPTION

Reflecting Los Angeles' annual addition of more population than any other U.S. city, and the equally rapid growth in industry and business, demand for water increased substantially over the preceding year. Water consumption for the 1955-56 year was 144,067,000,000 gallons, up 3,654,000,000 gallons or 2.6% over the previous year. Actually, use of water for all purposes other than irrigation increased 4.3% and reached an all-time peak. Use of water for irrigation has decreased as large agricultural areas within the San Fernando Valley district of the City of Los Angeles have been transformed by urban development, and in 1955-56 irrigation required only about one-half the amount of water needed three years earlier. Consumption for domestic, industrial, and commercial purposes averaged 367,000,000 gallons daily, compared with 351,000,000 gallons last year; the daily average for irrigation purposes was 28,000,000 gallons compared with 34,000,000 gallons the past year.

The city's average daily consumption was 395,000,000 gallons, an increase of 10,000,000 gallons over the preceding year. Per capita use was 165 gallons daily. Of special significance was the sharp rise in peak demand, representing the

Twin Lakes, nestled in the snow-capped Eastern High Sierra more than 300 miles north of Los Angeles, provide an important source of the city's water supply.

maximum water requirements that must be met at one time and for which ample capacity must be provided. On September 1, 1955, as the high point in water use during a long extended period of warm weather, consumption of water established a new record in Los Angeles of 756,000,000 gallons for the day. The previous peak of 684,000,000 gallons had been recorded on July 7, 1954.

SOURCES OF SUPPLY

To meet the increased demands for water, the Water System made use of the city's diversified sources of supply, which together can amply serve Los Angeles' needs, with reserve capacity for future growth.

LOCAL SOURCES: From the underground basin of the Los Angeles River, whose principal flow is below ground in the San Fernando Valley, and from the underground supply of the coastal plain, an average of 95.6 million gallons daily was obtained, meeting about 24% of Los Angeles' requirements. For the first time in several years, rainfall in Los Angeles exceeded normal with 16.00 inches for the year, or 108.5% of the long term average, according to U.S. Weather Bureau reports.

LOS ANGELES OWENS RIVER AQUEDUCT: From the Los Angeles city-owned Owens River Aqueduct and its Mono extension, which delivers water to Los Angeles from the great snowfields, lakes, and streams on the eastern slopes of the High Sierra from points as far away as 338 miles, the city obtained 271.4 million gallons of water daily or about 69% of its requirements. Snowfall in the High Sierra was above normal during the 1955-56 winter, with an indicated seasonal runoff of 114% of the long term average as compared with 67% the previous year. The anticipated runoff was considered more than ample to assure capacity flow of the Owens River Aqueduct, and with a surplus expected, the spreading of water was resumed on Depart-

ment-owned lands in the Owens Valley, Long Valley, and Mono Basin. Storage in reservoirs of the aqueduct system at the end of the fiscal year totaled 305,185 acre feet, an increase of 51,562 acre feet over the previous year.

COLORADO RIVER AQUEDUCT: From the Colorado River supply, Los Angeles obtained an average of 27.7 million gallons daily meeting about 7% of the city's needs. This use was about one-third greater than the use of Colorado River water by Los Angeles last year. Los Angeles' use of Colorado River water is also increasing percentagewise in relation to the other water sources. Los Angeles' present entitlement of Colorado River Aqueduct water through the Metropolitan Water District is about 380,000,000 gallons daily, indicating a substantial margin in reserve to meet the city's needs for a number of years ahead, as long as California's rights in the Colorado River are preserved.

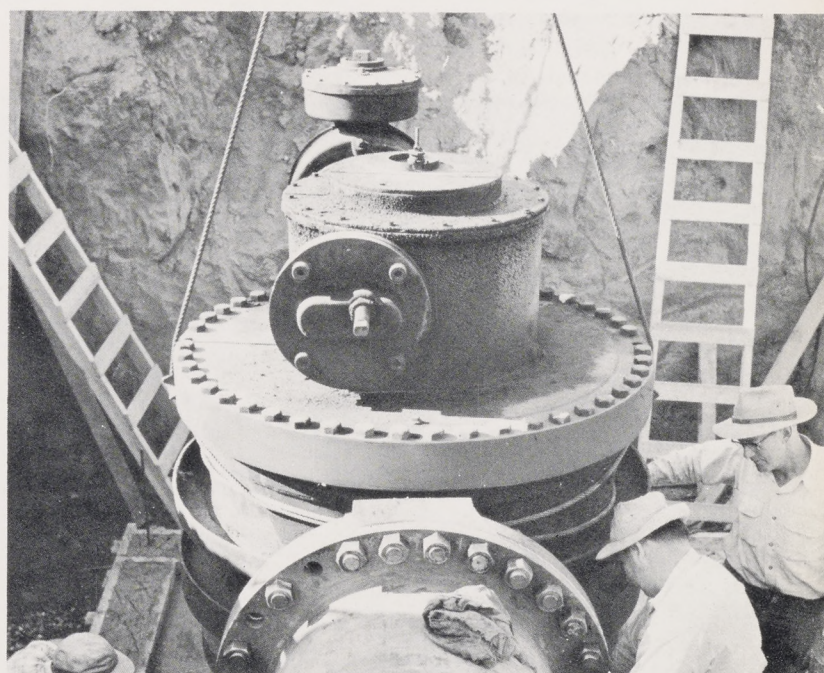
GROWTH IN SERVICES AND FACILITIES

Keeping pace with Los Angeles' expansion in new home construction, and in business and industrial development, there was a substantial growth in the number of Water System customers and in services and facilities during the 1955-56 year. At the end of the year, the number of customers totaled 528,823. The average number of customers served during the year was 522,929, as compared with 508,814 last year.

The principal growth in population and in need for new water facilities occurred in the outlying districts of the city. Increasing development of hilly and mountainous portions of Los Angeles also took place as part of the general increase in subdivision activities. A total of 1298 tentative subdivision tracts were submitted to the Water System to determine water needs, and of these 157 were located at higher elevations requiring pumped water systems. The latter number was 50% larger than in the previous year.



Lower Stone Canyon Reservoir, as seen from the inclined inlet-outlet structure, was returned to service in 1956 after an extensive improvement and enlargement project.



Water System crewmen install a 30-inch cone valve in the Granada Trunk Line, which will serve the fast-growing west San Fernando Valley.

At the end of the year, Water System facilities included: 529,973 active service connections, an increase of 18,333 over the preceding year; 5,756 miles of distribution mains, an increase of 119 miles; 79,061 gate valves, an increase of 1,618; and 33,945 fire hydrants, an increase of 1,016.

The Water System had an average of 2,580 employees in service during the year.

MAINTENANCE OF WATER QUALITY

From Los Angeles' several sources of supply, water of very good natural quality and purity is made available to the city. To maintain this original excellence, the Department of Water and Power systematically checks and tests the supply in reservoirs, pipelines and mains, and maintains constant guard against pollution. During the year, over 30,000 field and laboratory tests, examinations and analyses were made, and chlorination and other types of water treatment used as needed. The Department maintained vigilant sanitary protection over watershed areas and storage and distribution facilities. It gave careful attention to preventing water pollution by wastes from industrial operations. A vigorous drive was conducted to obtain installation of proper devices to prevent pollution of the water distribution system by backflow from private premises. Research was continued to develop and improve methods of water treatment and quality maintenance.

CONSTRUCTION OF WATER WORKS

With sources of water supply ample for the city's current and future needs, water works are being constructed principally to provide for increased close-in water storage and regulation and for increased distribution to meet the rapidly growing water demands. Under its five-year \$85,000,000 construction program, and in line with its policy of building works in advance to be ready when needed, the Water System during the 1955-56 fiscal year invested \$17,589,168 in additions, extensions and improvements.

EAGLE ROCK-HOLLYWOOD CONDUIT: Among the Water System's major projects are the large pipelines being constructed within the city as "internal aqueducts" to transmit large amounts of water from sources to major reservoirs or principal distributing points. One of these, the Eagle Rock-Hollywood Conduit, started in 1952 as Los Angeles' principal connection with the Colorado River Aqueduct system, was completed during the 1955-56 year. The final unit in the conduit's construction, consisting of 4800 feet of 60 inch welded steel pipe, was installed through difficult hillside streets to link with Hollywood Reservoir. The unit was constructed under contract at a cost of \$551,000. The \$9½ million Eagle Rock-Hollywood Conduit now extends ten miles from its connection with the Colorado River Aqueduct distribution system at Eagle Rock Reservoir to Hollywood Reservoir. Over most of its route, the pipeline is 68 inches in diameter and has a capacity of 171,000,000 gallons of water daily, enough to serve a population of more than a million persons.

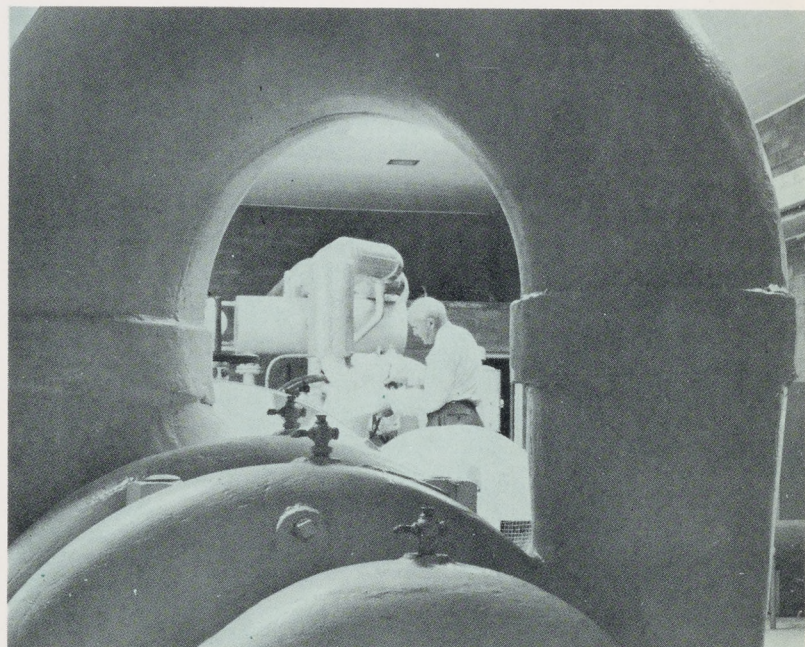
GRANADA TRUNK LINE: Another major pipeline under development as an "internal aqueduct" is the Granada Trunk Line, which will serve northwestern and western portions of the fast developing San Fernando Valley. The trunk line eventually will extend from the terminus of the Los Angeles Owens River Aqueduct at the penstock above the Van Norman Lakes (San Fernando Reservoirs) out to the extreme western

fringes of the San Fernando Valley, over a route more than 20 miles in length. The 48 inch diameter concrete pipe will serve water to higher elevations than now are reached by gravity flow from existing lines, and which otherwise would require pumped water service at a higher cost. Capacity of the Granada Trunk Line is 55,000,000 gallons daily. Linking with the first section of 6,440 feet installed the preceding year, another section of 13,200 feet was constructed in the 1955-56 year at a cost of \$595,671.

LOWER STONE CANYON RESERVOIR: The reconstruction and enlargement of Lower Stone Canyon Reservoir, started in February, 1954, was completed in February, 1956. The project, completed at a total cost of \$3,386,000, consisted of the reconstruction of the earth-fill dam and the inlet-outlet system, and the increase in the reservoir's maximum depth from 120 to 138 feet. Capacity of the reservoir was increased from 8,000 acre feet to 10,000 acre feet, or 3¼ billion gallons. A new earth-fill dam of 2,600,000 cubic yards was built. A new outlet line for the reservoir, consisting of 1,178 feet of 71 and 60 inch diameter tunnel and pipeline was completed. The enlarged reservoir, third in size within the city, provides additional storage and regulation of water for fast-growing western districts of Los Angeles.

DRY CANYON RESERVOIR BY-PASS: Work on the Dry Canyon Reservoir By-Pass Line, a new section of the Los Angeles Owens River Aqueduct, was brought close to completion during the year. The new 9½ foot diameter by-pass will enable water to be diverted around the reservoir when it is muddied by winter storms, thus delivering clean water to the city. Construction work consisted of the excavation and cement lining of a series of five tunnels, and the building of four conduit sections between them, the tunnels and conduit totaling 4,980 feet in length. The project, estimated to cost \$1,500,000, was completed except for installation of gate structures and connection of the by-pass to the Aqueduct.

WATER PROJECTS FOR ELEVATED AREAS: To meet the rapidly increasing demands for water service to hillside and mountain slope developments, the Water System had numerous water projects for elevated areas under construction.



Engineer checking operations at new Beverly Glen Pumping Plant, one of 77 pumping plants in the Los Angeles Water System.

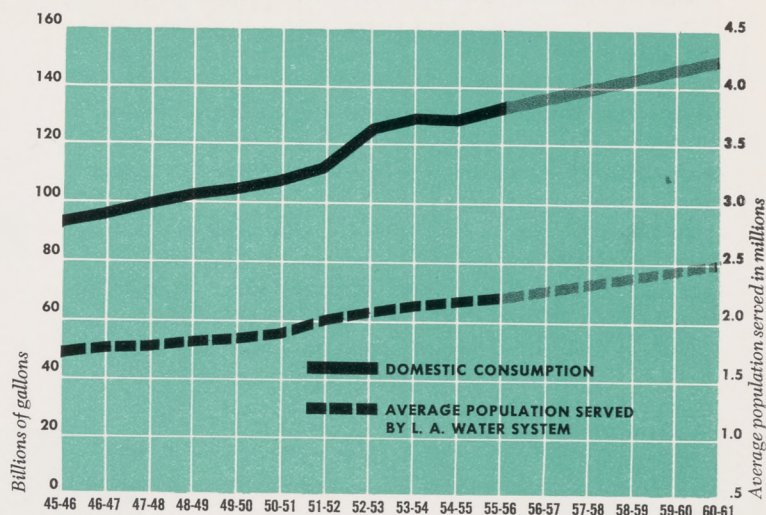
Pumping plant installations: The Sheldon Street Pumping Plant and its 36 inch discharge line extending 8,870 feet to connect with the Maclay Reservoir outlet line and providing an auxiliary water supply to the Sunland-Tujunga district from San Fernando Reservoir, was completed at an estimated cost of \$477,000. The Estepa Drive Pumping Plant to serve water at the 2,170 foot altitude in the Sunland-Tujunga district was completed. To serve hillside areas in the San Pedro district, the \$26,000 First Street Pumping Plant was completed and the San Pedro Pumping Plant, estimated to cost \$226,000, was about to be started. The Encino Pumping Plant, adjoining the Encino Reservoir, was under construction at an estimated cost of \$166,000, to serve the north slope of the Santa Monica mountains west of Sepulveda Boulevard, at an elevation of 1240 feet. Pumping plants serving the Hollywood Hills were enlarged.

New storage tanks to serve elevated areas: The 535,000 gallon Sister Elsie tank, serving water at elevations of 2340 feet, in the Sunland-Tujunga area, was completed. Under construction were the 1,800,000 gallon Rim Canyon tank and 1,000,000 gallon Highway Highlands tank, serving in the Tujunga and Highway Highlands areas; the 1,000,000 gallon Firenze tank serving the Mulholland-Laurel Canyon area; and the 1,000,000 gallon Roscomare tank serving the south slope of the Santa Monica mountains west of Sepulveda Boulevard.

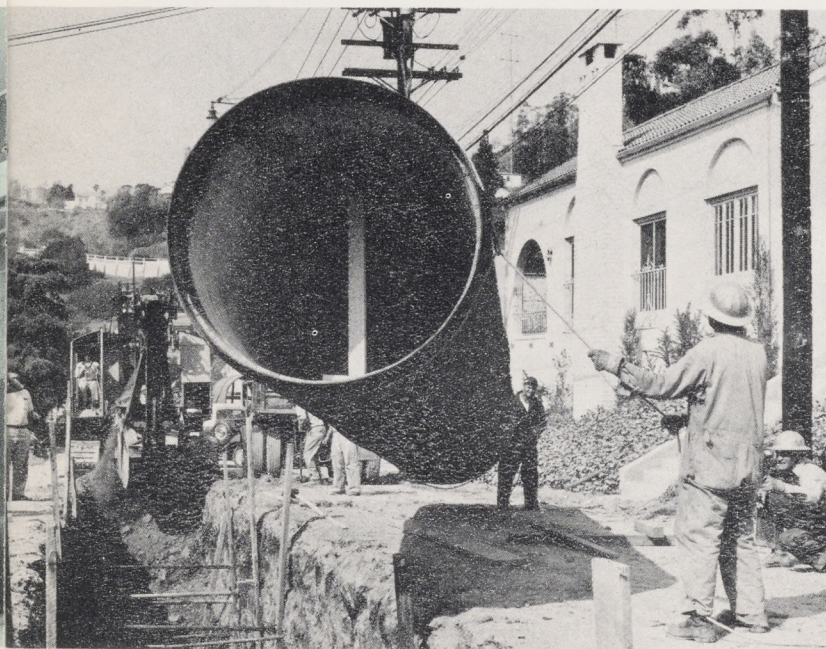
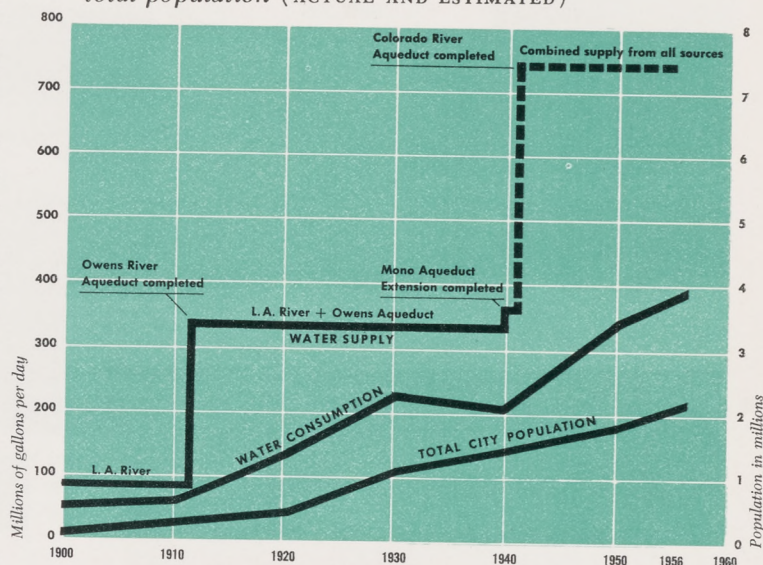
OTHER WATER WORKS: Improvements to the Los Angeles Owens River Aqueduct system, in addition to the Dry Canyon By-Pass Line described above, were carried out at various points. In the Little Lake, Freeman, and South Antelope divisions, 18,000 feet of the aqueduct was re-lined with reinforced concrete cover, and 9600 feet of the aqueduct between Lone Pine and Diaz Creek also received new reinforced concrete lining cover. Cement mortar lining was placed on 2,360 feet of Grapevine Canyon Siphon. Within the city over 175 miles of street mains were installed in many different sizes up to 61 inches in diameter.

New pressure regulating stations were installed in the continuing program to provide dependable water pressures at all points in the system. New headquarters service buildings were erected at Independence at a cost of \$225,000 and at Mojave at a cost of \$139,000.

Growth in water consumption (ACTUAL AND ESTIMATED)



Water supply, consumption and Los Angeles City total population (ACTUAL AND ESTIMATED)



Workmen installing section of 60-inch pipe in the fifth and final link of Eagle Rock-Hollywood Conduit, the city's first major connection with Colorado River Aqueduct supply.

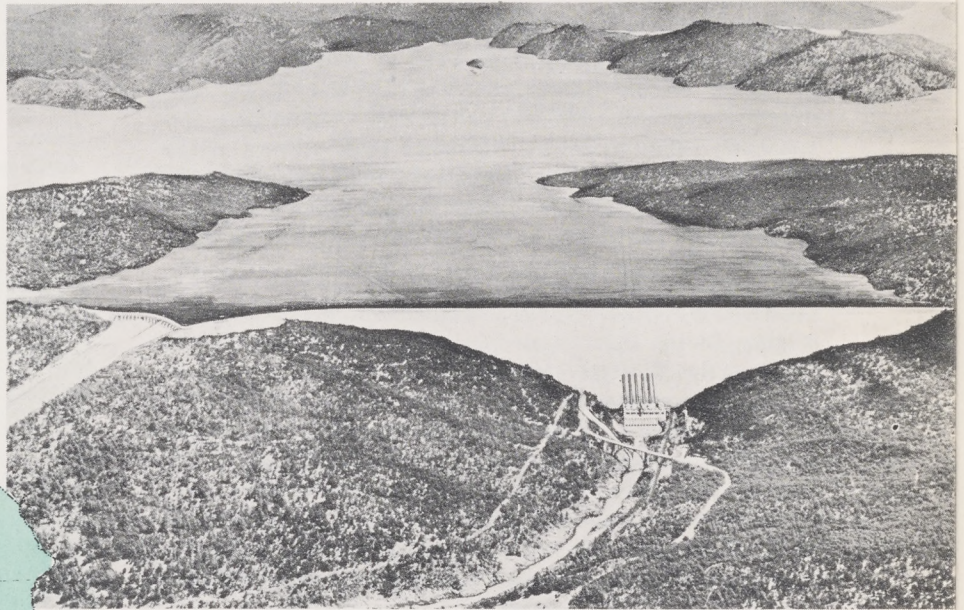


Relining an open-canal section of Los Angeles-Owens River Aqueduct, which brings water from as far as 338 miles north of Los Angeles.

WATER FOR THE FUTURE

One of the most unusual facts in Los Angeles' rapid rise to become the nation's third largest city is that this remarkable development has taken place in a land of so little natural water, making it necessary for Los Angeles to import the bulk of its water supplies. This situation has produced a blessing-in-disguise by making long range planning for ample water a basic necessity. As a result, the city has consistently had ample water in advance of need.

In the early years of the century, Los Angeles planned and built the giant Owens River Aqueduct to bring water from the eastern slopes of the High Sierra in distant central California. Then in the 1920's the Department of Water and Power looked ahead again, surveyed routes and launched plans for the even larger Colorado River Aqueduct. Los An-



Artist's conception of proposed Oroville Dam of California's Feather River Project. The huge structure being planned would be taller than Hoover Dam, and contain a larger volume of concrete than massive Grand Coulee Dam.

geles joined with other Southern California cities to form the Metropolitan Water District which built this Aqueduct.

THE FEATHER RIVER PROJECT

Rapid growth and increasing water use will require still another great water source in approximately fifteen years when the Colorado River Aqueduct as well as the Owens River Aqueduct and local supplies are all being used to capacity. Los Angeles is working with other communities and water agencies of California to help bring into being the State-planned \$1½ billion Feather River Project.

The project calls for construction of huge dams, reservoirs, and an aqueduct system over 560 miles long to deliver water from the Feather River in northern California to many areas of water need in northern, central, and southern California. The State has reserved 1,773,000 acre feet of water for delivery annually to Southern California, including Los Angeles, a supply 50% larger than the Colorado River Aqueduct's capacity. Engineering studies and surveys of aqueduct routes are being made by the State, and the State Legislature early in 1956 appropriated \$9,350,000 for this work and for acquisition of lands and rights of way for the two principal facilities, the reservoir at Oroville, California, and the San Luis reservoir near Los Banos, California.

WATER WORKS DEVELOPMENT WITHIN THE CITY

Meanwhile, the Department of Water and Power is planning and building water works for immediate future needs, to assure ample storage, regulation, and distribution of water within the city, under a five-year \$85,000,000 construction program of water works.

Continuing the expansion of its "internal aqueduct" system of large interconnected pipelines, the Water System is planning construction of new major trunk lines. One of these is the Hollywood Reservoir Outlet Line, approximately two miles in length, consisting of a 72 inch outlet tunnel and a 60 inch pipeline, with the project estimated to cost \$1,315,000. It will connect with the Eagle Rock-Hollywood Conduit and with the Van Ness Avenue Trunk Line and serve water to the Hollywood and Wilshire districts.

The Granada Trunk Line will be extended to a length of over 20 miles to serve northern and western areas of the San Fernando Valley with up to 55,000,000 gallons daily. Unit II of the line planned for early construction will consist of 21,230 feet of 48 inch diameter pipe, extending from Rinaldi Street and Zelzah Avenue to the De Soto Reservoir. Estimated cost is \$990,000.

New storage facilities planned for the western San Fernando Valley area will include the Mason Avenue Reservoir, of 1100 acre feet capacity, which will cost about \$3,000,000, and the Shoup Avenue Reservoir, a 5,000 acre foot terminal reservoir for the Granada line, estimated to cost \$4,120,000. The enlargement of the existing Maclay Reservoir is also planned.

To meet the growing need for water at higher elevations, the Department of Water and Power is expanding its construction of pumping plants, supply lines, and high level reservoirs and tanks. About one-fourth of Los Angeles' 454 square mile area is at elevations that will require delivery of water by pumping systems.

Future planning also contemplates construction of new reservoirs in the Venice, Pacific Palisades, northeast Los Angeles, and other districts of the city, enlargement of existing water storage facilities and installation of 150 to 200 miles of distribution mains annually.

WATER SYSTEM FACTS IN BRIEF

	1945-46	1954-55	1955-56	1955-56 Increase (Decrease) Over 1945-46
USE OF WATER				
Average Population Served	1,702,000	2,162,000	2,223,000	31%
Active Services	335,231	511,640	529,973	58%
Meters in System*	331,549	524,923	539,152	63%
Daily Consumption (Gals.)	321.5 mil.	384.8 mil.	394.7 mil.	23%
Daily Use Per Capita (Gals.)**	149	162	165	11%
Water Sales for Fiscal Year (Gals.)	110.3 bil.	130.0 bil.	131.7 bil.	19%
Maximum Daily Demand (Gals.)	515.8 mil.	683.8 mil.	756.2 mil.	47%
Peak Hour Demand (Gals. Per Hour)	31.1 mil.	47.6 mil.	55.7 mil.	79%
Annual Pumpage (Gals.)	54.1 bil.	64.2 bil.	67.1 bil.	24%
GROWTH OF SYSTEM				
Utility Plant, Less Depreciation	\$135,856,438	\$223,199,865	\$234,885,510	73%
Reservoirs and Tanks	90	98	97	8%
Storage Capacity, Acre Feet	402,305	404,151	406,525	1%
Miles of Conduit	24.4	30.6	35.0	43%
Total Miles, Distribution Lines	4,366.1	5,637.3	5,756.4	32%
Volume of Distribution Lines (Gals.)	138.0 mil.	187.2 mil.	189.3 mil.	37%
Main Gate Valves in System	61,361	77,443	79,061	29%
Fire Hydrants	22,673	32,929	33,945	50%
WATER SUPPLIED TO DISTRIBUTION SYSTEM				
From L. A. Aqueduct, Cu. Ft. Per Second	369.2	415.5	419.9	14%
From Local Supply, Cu. Ft. Per Second	122.2	148.0	147.9	21%
From Metropolitan Water District, Cu. Ft. Per Second	6.1	31.9	42.9	603%
Storage in Aqueduct Reservoirs, Year End, Acre Feet	311,270	253,623	305,185	(2%)
FINANCIAL				
Assets—Less Provisions for Depreciation	\$153,242,061	\$237,193,299	\$249,603,793	63%
Funded Debt	48,121,150	82,841,000	88,199,000	83%
Total Income	16,486,833	28,203,862	28,985,079	76%
Net Income	5,225,742	6,211,611	5,830,600	12%

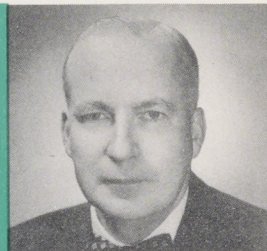
*Includes Active and Inactive

**Irrigation Water Excluded

Statistical reports for the 10 years ending June 30, 1956, including tables and charts, may be obtained upon request to the Department of Water and Power.

POWER SYSTEM

ACCOMPLISHMENTS — 1955-56



IVAN L. BATEMAN
Chief Electrical Engineer
and Assistant Manager

To keep pace with the multiplying requirements for electric energy in the rapidly growing City of Los Angeles, the Power System of the Department of Water and Power continued its expansion of services and facilities during the 1955-56 fiscal year.

Major new generating installations were placed in service, and transmission and receiving facilities were extended and enlarged.

INCREASE IN POWER USE

The average number of customers served by the Power System during the year rose to 829,058, an increase of 25,138 over the previous year. Total number of electric customers at the end of the year was 836,913.

Sales of electric energy totaled 5,399,000,000 kilowatt hours for all classes of customers. The increase over last year of 594,000,000 kwh was the largest recorded by the Power System in the post-World War II period. Excluding sales of energy to other electric utilities, which rose at a higher rate, energy sales were up 12.2% over the preceding year.

Residential sales totaled 1,465,000,000 kwh, an increase of 10.2% over the previous year; commercial sales were 2,337,000,000 kwh, up 13.8%; industrial sales totaled 1,394,000,000 kwh, up 12.2%. Average annual consumption of electricity per customer also increased, rising to 2,114 kwh for residential users, 18,722 kwh for commercial users, and 155,929 kwh for industrial customers.

A new peak in net generation of energy for the Department's customers was reached on December 1, 1955 at 1,187,000 kilowatts, an increase of 83,000 kilowatts over the previous year's peak.

GROWTH IN GENERATING CAPACITY AND PRODUCTION

Increased demands upon the Power System were met through enlargement of the system's generating capacity and the increased production of electric energy. The net dependable generating capacity of the Power System was 1,643,000 kilowatts as of June 30, 1956, an increase of 305,000 kilowatts over the previous year.

A gross total of *6,559,000,000 kilowatt hours was generated, purchased, and received through interchange during the year — an increase of 10.3% over the preceding year.

Gross generation on Department of Water and Power units at Hoover Dam decreased to 818,996,000 kwh compared with 1,213,924,000 kwh the preceding year and 1,671,750,000 kwh two years ago — a decrease of about one-third in one year and one-half in two years.

*This is the total for the system, including energy generated for other utilities, and energy purchased and received through interchange. Net energy for load, or energy for Department customers, totaled 6,032,000,000 kwh.

This decrease at Hoover Dam and the over-all increase in power demands were met principally by a substantial enlargement in production at the Department's steam power plants, which generated 4,690,925,000 kwh in the 1955-56 fiscal year, as compared with 3,663,808,000 kwh the previous year.

CHANGING EMPHASIS FROM HYDRO TO STEAM

The year saw an acceleration in the Power System's shift of the past three years from principal dependence on hydro-electric generation to principal dependence on steam power production.

The reduction in power available to the Department at Hoover Dam was due to two principal causes: Increased use by other allottees of their shares of Hoover power, leaving less unused energy for sale to the Department; and the sharp reduction in total power production at Hoover Dam because of the long drought on the Colorado River and resultant low water at Lake Mead. In April, 1956, the lake was at its lowest point since the reservoir was first filled in 1937. During the Hoover power plant operating year of June 1, 1955 to May 31, 1956, the plant produced only 62.5% of its firm power commitments and generated no surplus or secondary energy. Reduction in firm power production is expected to be almost as great in the 1956-57 year, with approximately 65% of firm generation anticipated. However, when normal water conditions return on the Colorado River, this will permit resumption of normal power production at Hoover Dam.

The Department's steam generating plants supplied 74% of Los Angeles' electric energy needs (net energy for load) in 1955-56, as compared with 64% in 1954-55, and 11% in 1947-48. Hoover Dam supplied 10% in 1955-56, as compared with 18% in 1954-55, and 77% in 1947-48.

In spite of changes in operating conditions, the Power System by planning and building additional sources of power supply has been able to keep pace with Los Angeles' rapidly expanding electric demands and provide ample generating capacity to meet all operating requirements.

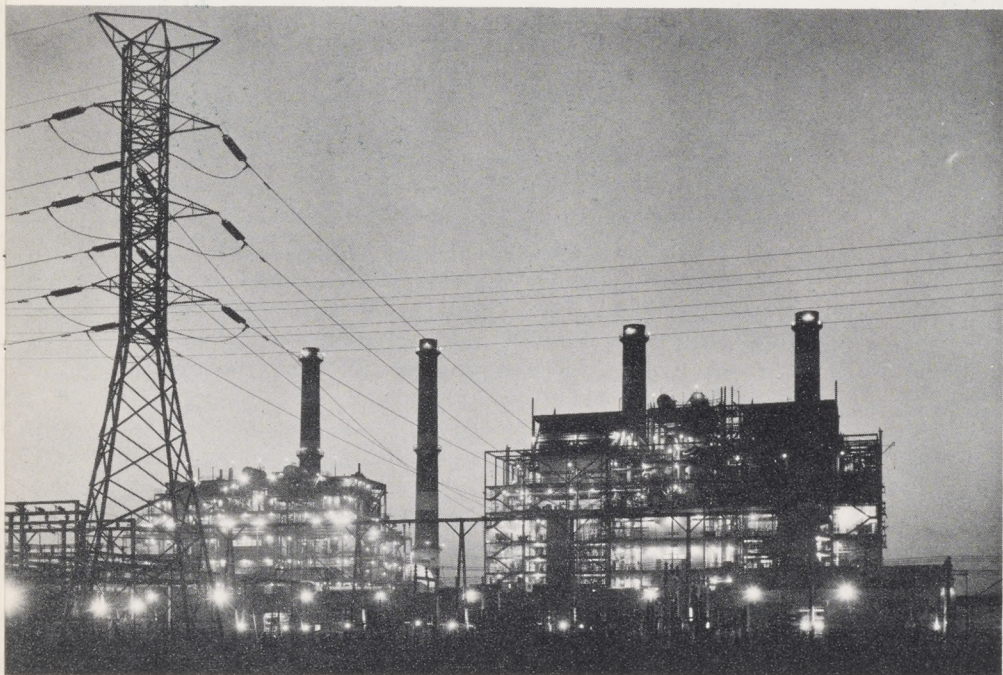
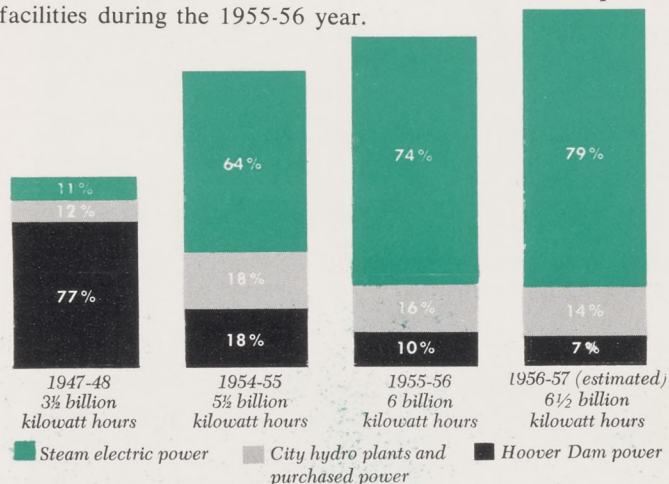
To carry on its work the Power System had an average of 6,990 employees during the year.

PROMOTION OF POWER SALES

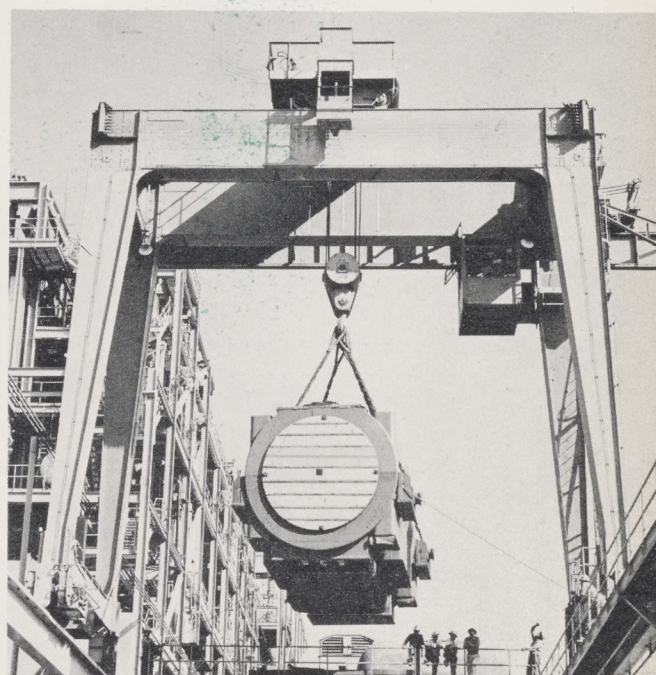
In the residential field, vigorous sales promotion backed by advertising resulted in a decided uptrend in the use of home electric appliances. Eighty new residential tracts installed or planned to install about 4,000 electric kitchens or laundries, or both. An electric dryer campaign stimulated increased sales of this appliance. Increased emphasis on adequate wiring resulted in 70% of new single family dwellings installing 100 ampere major service or better. The Department joined enthusiastically in the national Live Better Electrically program to increase the use of electricity in the home. Excellent results were also obtained from greater promotional efforts in the fields of commercial and industrial light and power applications. Rapid industrial growth within the City of Los Angeles was reflected in the establishment of 62 new industries and enlargement of 157 existing plants, with a total new investment of \$117,000,000 during the year, resulting in the creation of 11,661 new jobs and further advances in the city's economy.

CONSTRUCTION OF POWER FACILITIES

Providing additions, extensions, and improvements in the Power System to meet ever-increasing electric demands, the Department invested a total of \$46,331,632 in electric plant facilities during the 1955-56 year.



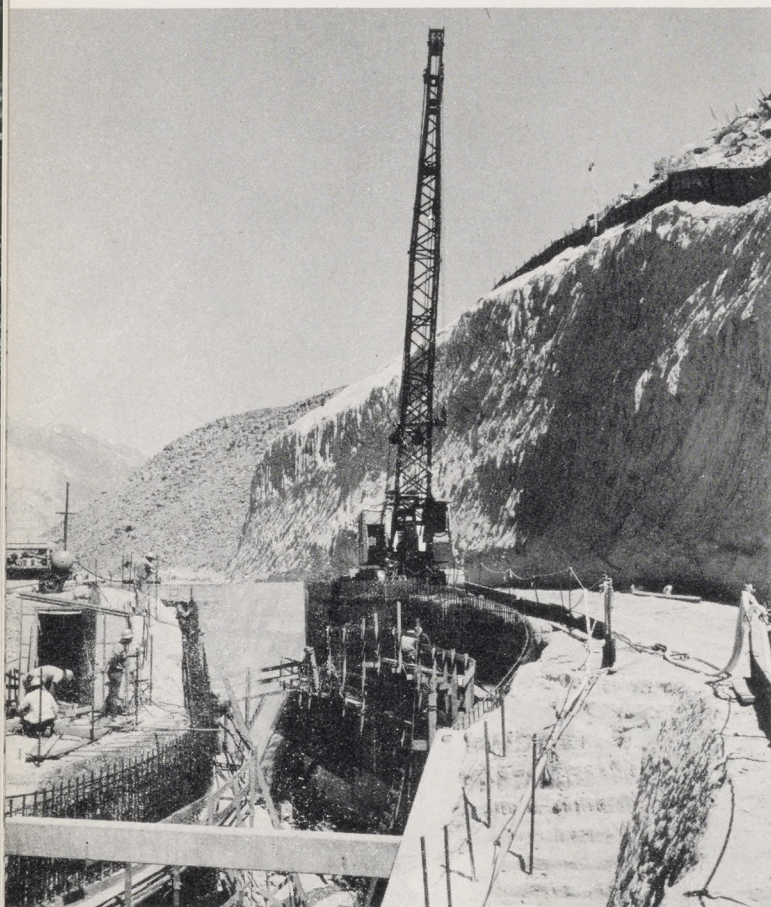
Night scene at new \$81,000,000 Valley Steam Plant. The fourth and final generating unit was placed in operation early in 1956, giving the plant a total generating capacity of 512,000 kilowatts, enough electricity to serve 1,000,000 people at the present rate of use.



Huge 156,000-kilowatt-capacity generator for Unit No. 4 arrives at Valley Steam Plant and is lifted by gantry crane across generator deck into position.



Steelworkers bolt top of transmission tower to new base, increasing height of tower for added clearance.



Construction of side channel spillway at Pleasant Valley dam and re-regulating reservoir about 10 miles north of Bishop on the Owens River.

GENERATING FACILITIES: The Power System's largest construction project, the \$81,000,000 Valley Steam Plant, was brought close to completion during the year. The third and fourth turbine-generating units, each of 156,250 kilowatts capacity, were placed in service. With the first two units already in operation, the additions brought the plant's total capacity to 512,500 kilowatts. Each unit operates as an individual power plant complete with its own boiler, auxiliary facilities and transformer bank. For the third and fourth units, the boilers are 150 feet in height, and able to produce 1,200,000 pounds of steam per hour at 1,850 pounds per square inch at a temperature of 1000 degrees, with a reheat cycle of 1000 degrees. The third unit began operation on November 4, 1955, and the fourth unit on May 16, 1956.

Rebuilding of the turbine of Harbor Steam Plant's unit No. 5 during the year resulted in an increase of 15,000 kilowatts in its capacity.

An important project to make possible greater peak production at the Department's Owens Gorge hydroelectric plants was under construction during the year on the Owens River below these power plants. The Pleasant Valley re-regulating reservoir, about 2½ miles down stream from the Control Gorge power plant, lowest of the three Gorge plants, was nearing completion at the end of the year. A compacted earth-fill dam, 87 feet high and with a crest length of 530 feet, was completed under contract. The intake structure was also completed, and the outlet tower and spillway were nearing completion. The reservoir, with capacity of 3,825 acre feet, will be able to store the increased volume of water discharged from the Gorge power plants during peak operations, and re-regulate the flow to eliminate rapid fluctuations in the Owens River below Pleasant Valley.

The project will also include a 3200 kilowatt capacity power plant, and preliminary work on the plant was under way during the year. Estimated total cost of the Pleasant Valley reservoir project including the power plant is \$3,750,000.

TRANSMISSION AND BELT LINES: During the year numerous improvements and extensions were completed to the transmission system of the Department. All receiving stations are interconnected by transmission lines, and work has been in progress for some time on the conversion of older lines from 115,000 volts to 138,000 volts. During 1955-56 all remaining transmission circuits to Receiving Station "A," the city's first receiving station, were converted to 138,000 volts. At Receiving Station "J" in the west San Fernando Valley, the 115,000 volt lines from the Aqueduct power plants in San Francisquito Canyon were replaced by a 138,000 volt line from Sylmar Switching Station, and the 115,000 volt lines from the plants were terminated at Sylmar. Two 138,000 volt circuits from Sylmar to Receiving Station "E" in the east San Fernando Valley were also placed in service. New 138,000 volt connecting lines from Station "E" to Stations "G" and "J" were provided.

To serve two new receiving stations, "K" and "M," 138,000 volt belt lines were completed. Station "K" in West Los Angeles was connected by a newly completed second underground circuit to Station "D," and by the overhead and underground West Valley Transmission Line to Station "J." Nearing completion at the end of the year was a second circuit on the Valley Transmission Line crossing the Santa Monica mountains between "K" and "J." New Receiving Station "M" was connected with Receiving Station "E" by a new 138,000 volt line. Various 34,500 volt subtransmission lines were installed to connect receiving stations to new distributing stations.

Population and electric energy requirements
(ACTUAL AND ESTIMATED)

RECEIVING STATIONS: New Receiving Station "K" at 1840 Centinela Avenue began operation during the year, with an initial installed capacity of 192,000 kilowatts, and an initial investment of approximately \$3,000,000.

New Receiving Station "M" adjacent to the Valley Steam Plant was also energized during the year, with an initial installed capacity of 50,000 kilowatts, later increased to 100,000 kilowatts. An investment in the station of about \$737,000 had been made by the end of the fiscal year.

The Sylmar Switching Station in the north San Fernando Valley was rebuilt and enlarged as a terminal for transmission lines from the Owens Gorge and Aqueduct power plants, at a cost of about \$2,450,000.

DISTRIBUTING SYSTEM: Two new distributing stations were placed in service and others were under construction. These new stations are of the Department's most recent design embodying tilt-up concrete slab wall construction in which most of the electrical equipment is located in the courtyard of a structure that has the outward appearance of an enclosed building. This new design has effected a saving of more than 25% in the cost of new distributing stations, and has resulted in handsome modern structures which are highly acceptable in appearance to the surrounding community. At the year's end, there were 107 distributing stations in operation with a total capacity of 1,661,512 kilovolt amperes, as compared with 1,560,512 kva the year before.

Other increases in the distributing system during the year: Industrial sub-stations, from 474 to 507 and from 505,296 to 568,331 kva capacity; commercial sub-stations, from 487 to 493, and from 282,962 to 305,474 kva; overhead distribution extensions, 22 new feeder circuits, 129 miles of primary circuits, 131 miles of secondary circuits, and 176 miles of distribution pole lines; underground distribution extensions, 16 miles of primary circuits, 14 miles of secondary circuits, and 110 miles of service cable.

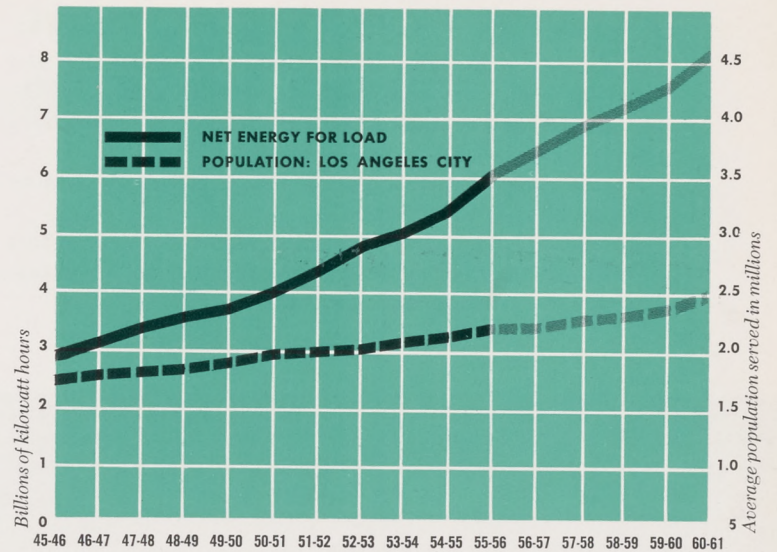
At the end of the year there were in operation in the overhead low voltage system 4,793 miles of primary circuits, 3,277 miles of secondary circuits, and 5,694 miles of distribution pole lines; and in the underground low voltage system, 447 miles of primary and secondary conduit lines, 564 miles of service conduit, and 3,461 miles of primary, secondary and service cables.

Distribution transformers, both overhead and underground, increased to a total of 60,682, with a total capacity of 1,492,634 kva. Street lights in service totaled 104,463, an increase of 3,358 over the previous year. Electric meters in service totaled 901,860, an increase of 22,951 over the preceding year.

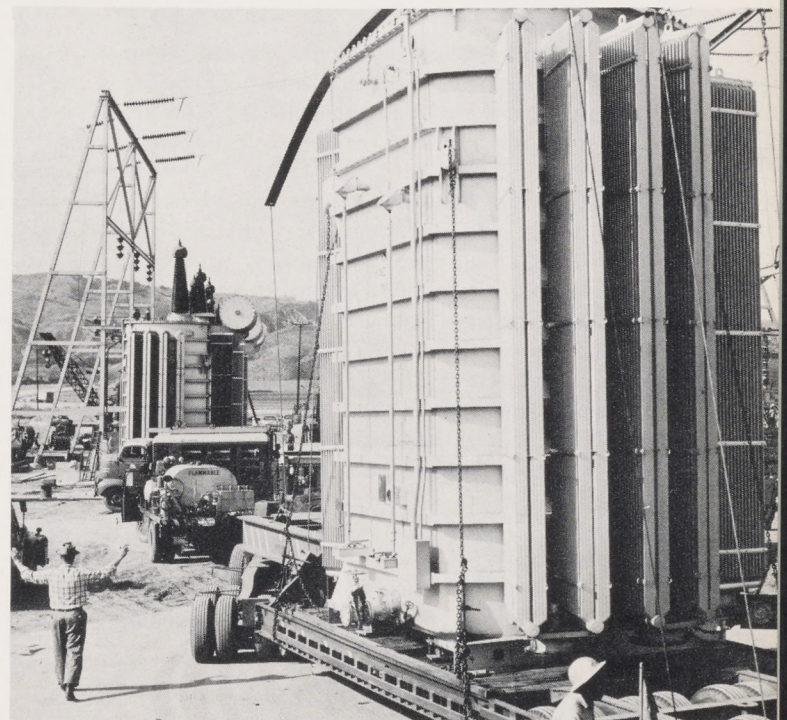
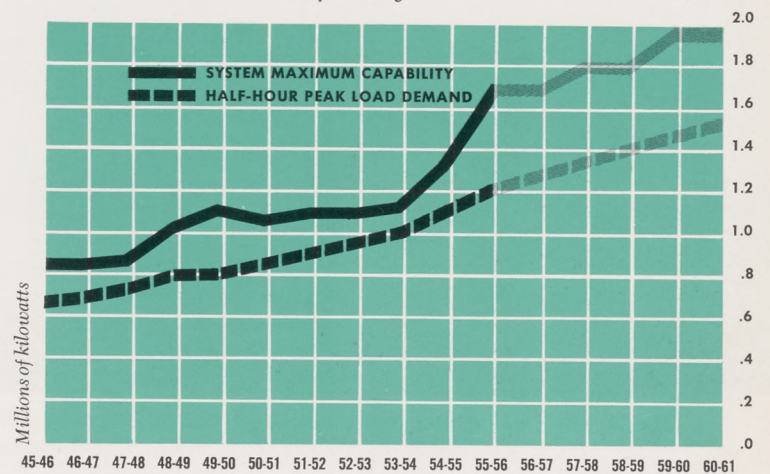
OTHER CONSTRUCTION: Work began during the year at 1630 North Main Street on the construction of new heavy mechanical shops, an office building, salvage facilities building, and other structures, at an estimated total cost of \$1,600,000.

Nearing completion at the end of the year in Van Nuys was a large new commercial office building and district center for business activities serving the San Fernando Valley. Estimated total cost is \$515,000.

Communications facilities were further enlarged following completion last year of a new communications center building in central Los Angeles. A district communications building for the San Fernando Valley was nearing completion in Van Nuys. Microwave radio systems were added to the Department's diversified media of communications.



Demand and capability (ACTUAL AND ESTIMATED)



Huge 90-ton, 30,000-kva transformers arrive at Sylmar Switching Station to handle energy generated at the Owens Gorge hydroelectric plants.

POWER FOR THE FUTURE

Los Angeles' remarkable advance as a great population and industrial center has been made possible by ample supplies of water and low-cost dependable electric power, which have always been available on time as needed.

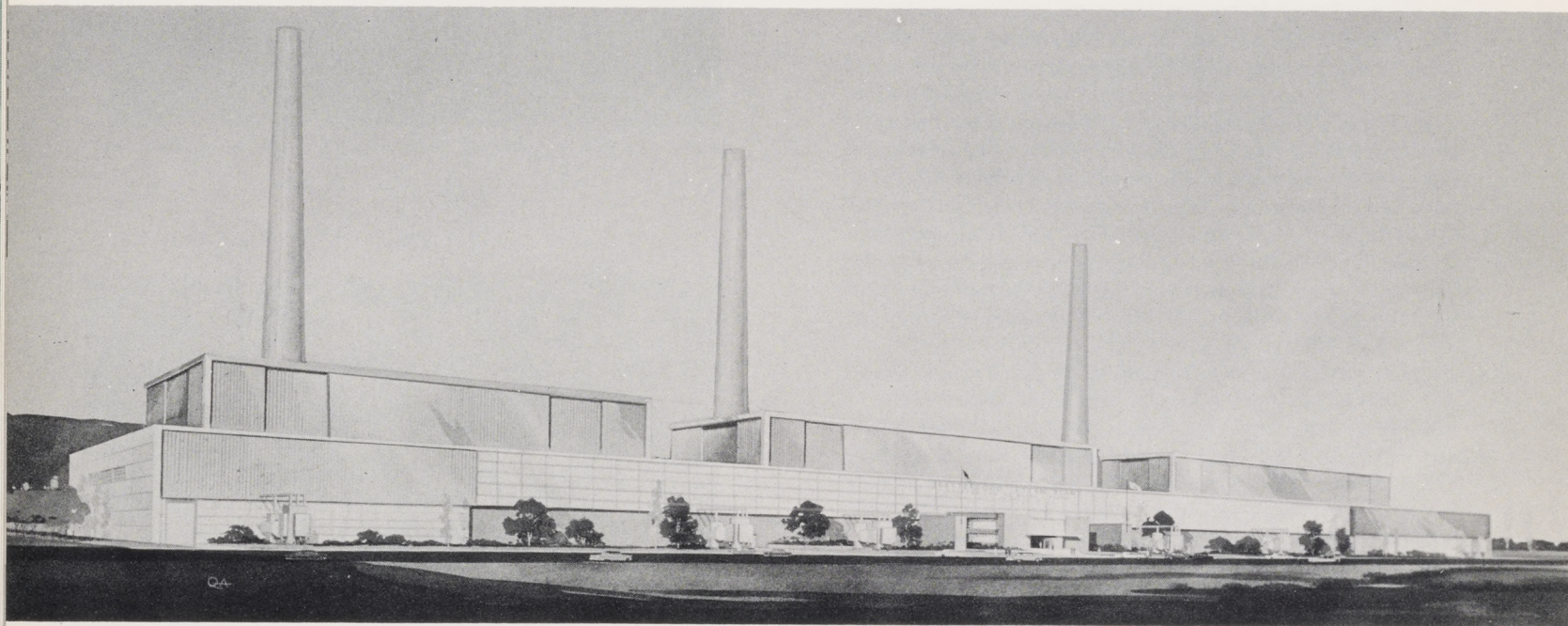
In the current ten-year period, use of electricity is more than doubling in Los Angeles.

Increased generating capability required to meet this growth will be provided through new facilities on which preliminary construction work has started.

Plant, which will be larger than the Scattergood Plant. A 200-acre site is being acquired on the San Gabriel River channel near tidewater at the Department's present Seal Beach Steam Plant. The contemplated ultimate capacity of the plant is 1,300,000 kilowatts, with the first unit scheduled to go into service during the 1960-61 fiscal year.

OTHER NEW GENERATING FACILITIES

Studies are being conducted of possible sites for other new



Artist's conception of Scattergood Steam Plant to be built on the ocean front at Santa Monica Bay. The Plant ultimately will accommodate six generating units, with total capacity of over 1,200,000 kilowatts.

SCATTERGOOD STEAM PLANT

Excavation and grading of the site has begun for the giant new Scattergood Steam Plant, which will be one of the largest steam electric generating plants in the West. It will be located on a 61-acre site at tidewater on Santa Monica Bay in the Hyperion district of Los Angeles. Two turbine-generating units, each of 156,250 kilowatts, will provide an initial capacity of 312,500 kw. Four larger units will be installed later providing an ultimate total capacity of more than 1,200,000 kilowatts. Estimated cost of the first two units is \$60,000,000.

Contracts have been awarded for the first two turbine generators at a price of \$7,725,976 and for the first two boiler units at a price of \$5,737,451. Turbines will be tandem compound, triple-flow exhaust type installations; boilers will be 150 feet in height and capable of producing 1,200,000 pounds of steam per hour at 1850 pounds per square inch, at 1000 degrees with a 1000 degree reheat cycle. The first unit is scheduled for completion during the 1958-59 fiscal year; the second in 1959-60.

The plant will be named as a memorial to E. F. Scattergood, pioneer founder and first chief electrical engineer of the Los Angeles Power System.

HAYNES STEAM PLANT

Plans are also being developed for the new Haynes Steam

steam generating plants. The possibilities of obtaining hydroelectric energy from future federal developments along the Colorado River and from the state-planned Feather River Project aqueduct are also under study. Close contact is also being maintained with atomic power advancements in the nation and key personnel trained so that production of electricity from atomic energy may be undertaken when it is practical from the economic standpoint.

TRANSMISSION, RECEIVING AND DISTRIBUTING FACILITIES

Paralleling the expansion of power generation, the Department is planning for an expanded transmission, receiving and distributing system. An extensive study is also under way on the problems of long-distance energy transmission from possible new plant facilities outside the Los Angeles area.

Development of new major receiving stations is under way, with additional stations planned. Eleven receiving stations are presently in operation with a twelfth, Receiving Station L, to be located adjacent to the new Scattergood Steam Plant. Modern new distributing stations are being built to handle growing electric loads in various sections of the city, and the overhead and underground distribution systems are being expanded to meet advancing requirements.

POWER SYSTEM FACTS IN BRIEF

	1945-46	1954-55	1955-56	1955-56 Increase (decrease) over 1945-46
POWER PRODUCTION IN KILOWATT-HOURS				
<i>(Including all generation of Hoover units connected to DWP system)</i>				
Hoover energy (incl. U.S. Government and Public Allottee use)	2,851,499,000	1,213,924,000	818,996,000	(71%)
Hydro Plant Production (Aqueduct, Owens Gorge & Owens Valley)	422,883,000	848,823,000	840,245,000	99%
Steam Plant Production	203,682,000	3,663,808,000	4,690,925,000	2,203%
Received from Interchange and Purchases other than Hoover	34,334,000	217,850,000	208,877,000	508%
Total—Gross Energy Generated, Purchased and Received from Interchange	3,512,398,000	5,944,405,000	6,559,043,000	87%
POWER USE				
Domestic Users	474,168	670,836	693,286	46%
Commercial Users	93,440	122,234	124,850	34%
Industrial Users	6,942	8,918	8,938	29%
Miscellaneous Customers	1,181	1,932	1,984	68%
Total Customers—All Classes	575,731	803,920	829,058	44%
Sales to Ultimate Consumers—Kilowatt-Hours	2,561,192,000	4,802,362,000	5,386,012,000	110%
Sales to other utilities—Kilowatt-Hours	132,690,000	2,669,000	13,400,000	(90%)
Used in Operations and Lost in Transformation, Transmission & Distribution—Kilowatt-Hours	506,920,000	886,369,000	938,020,000	85%
Average Annual Kilowatt-Hours per Domestic Customer	1,326	1,982	2,114	59%
Estimated Annual Revenue from New Business	\$ 2,000,372	\$ 4,826,117	\$ 5,318,677	166%
GROWTH OF SYSTEM				
Utility Plant (less accumulated provisions for depreciation)	\$ 174,873,218	\$ 432,226,759	466,847,262	167%
Generating Stations—Net Dependable Capability*—Kilowatts	828,000	1,338,000	1,643,000	98%
Transmission Circuits—34,500 to 287,500 volt	1,022 miles	1,398 miles	1,402 miles	37%
Subtransmission Circuits—13,800 to 34,500 volt	994 miles	1,190 miles	1,235 miles	24%
Distribution Circuits—120 to 4,800 volt	6,661 miles	8,884 miles	9,166 miles	38%
Transformer Capacity—Distributing & Industrial Stations—Kilovolt-Amperes	1,160,757	2,065,808	2,229,843	92%
Number of Distributing Stations	87	105	107	23%
Number of Industrial Stations	225	474	507	125%
Power Poles in Use	189,935	247,620	255,300	34%
FINANCIAL				
Assets—(less provisions for depreciation)	\$240,279,002	\$ 470,802,900	\$513,587,470	114%
Funded Debt	107,055,486	208,022,890	241,911,430	126%
Total Income	42,364,950	72,503,597	80,917,466	91%
Net Income	15,104,565	13,602,706	12,890,451	(15%)

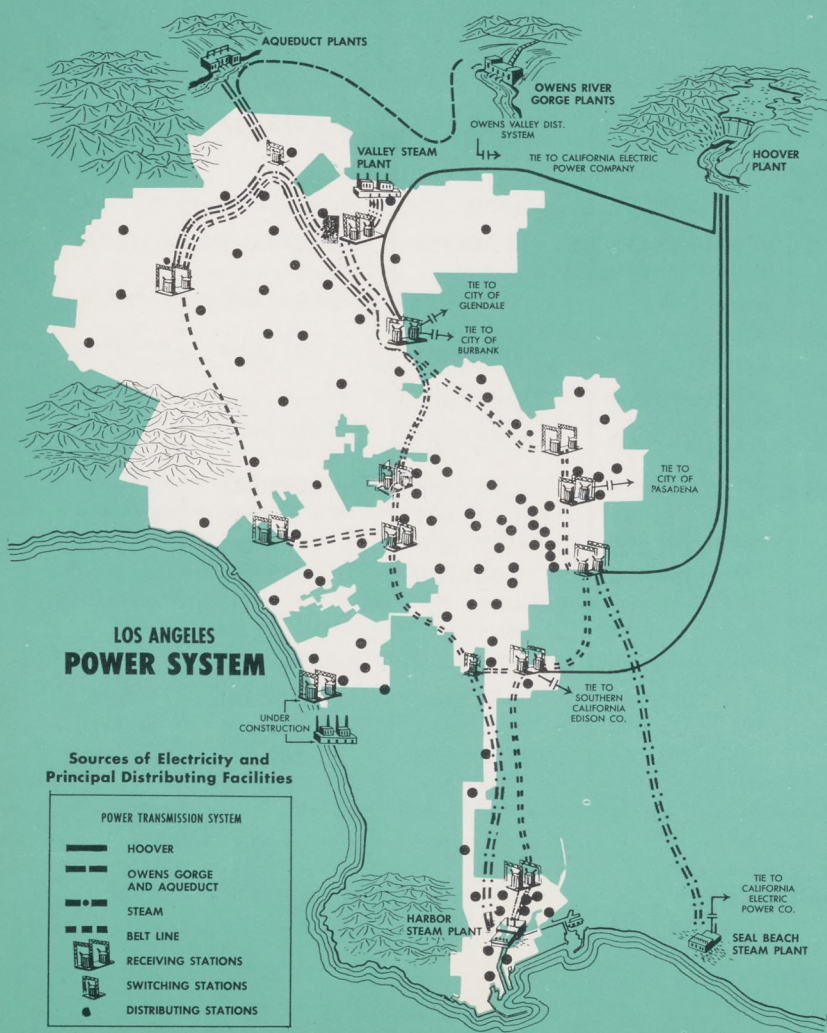
*Normal water conditions—Maximum permissible 2-hour loading.

Statistical reports for the 10 years ending June 30, 1956, including tables and charts, may be obtained upon request to the Department of Water and Power.



WATER SYSTEM SOURCES AND DISTRIBUTION

The City of Los Angeles, indicated by the white area on the map, has a three-way source of water supply, including the Los Angeles River basin and local wells, the Los Angeles Owens River Aqueduct system, and the Colorado River Aqueduct. Storage and regulation are provided through a total of 97 reservoirs and tanks with a total capacity of 406,525 acre feet, representing storage capacity of almost a year's supply of water for the city. Distribution to water consumers is effected through a system of principal pipelines within the city connected to sources of supply and to storage reservoirs, and through 5,756 miles of distribution mains.

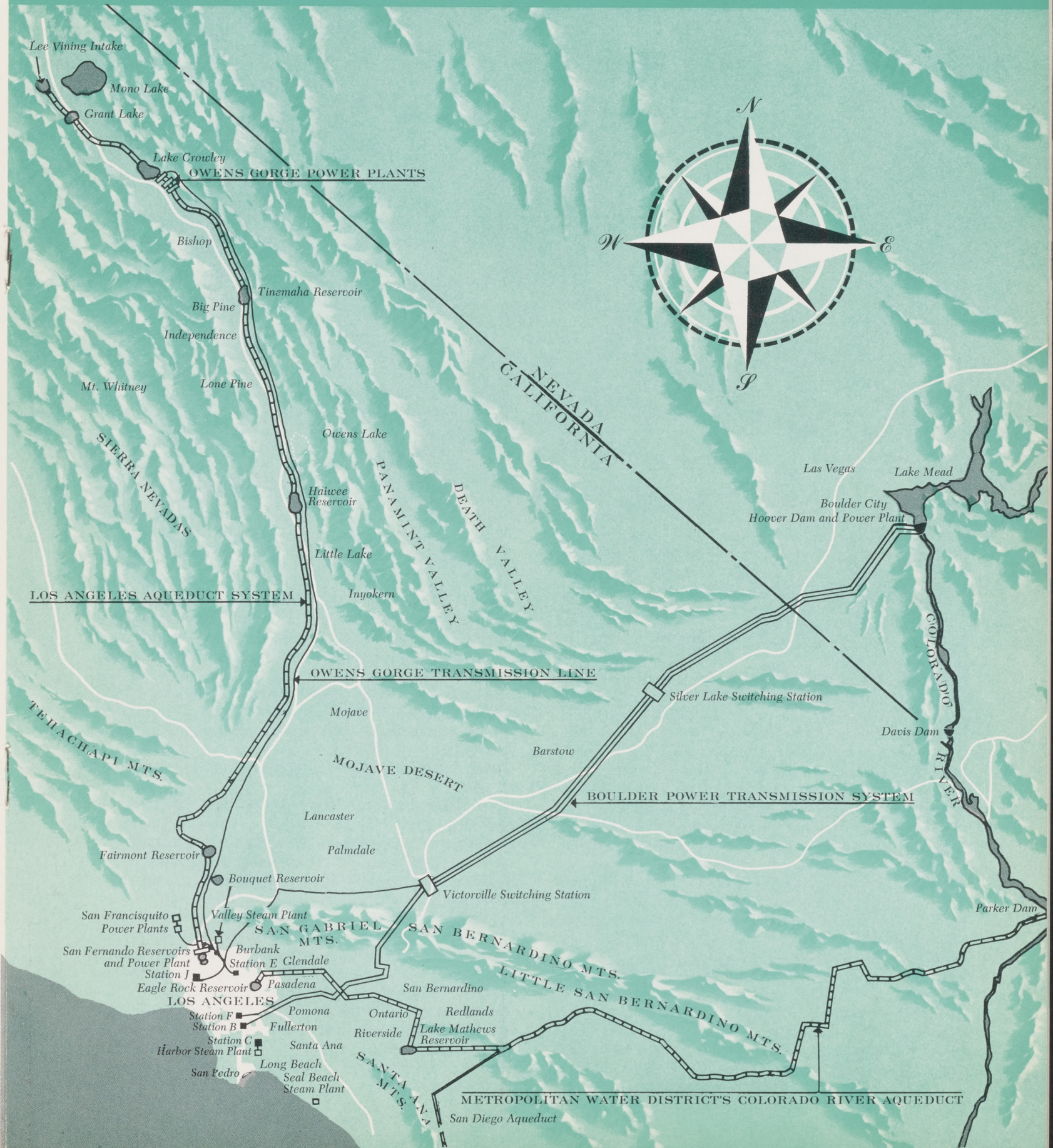


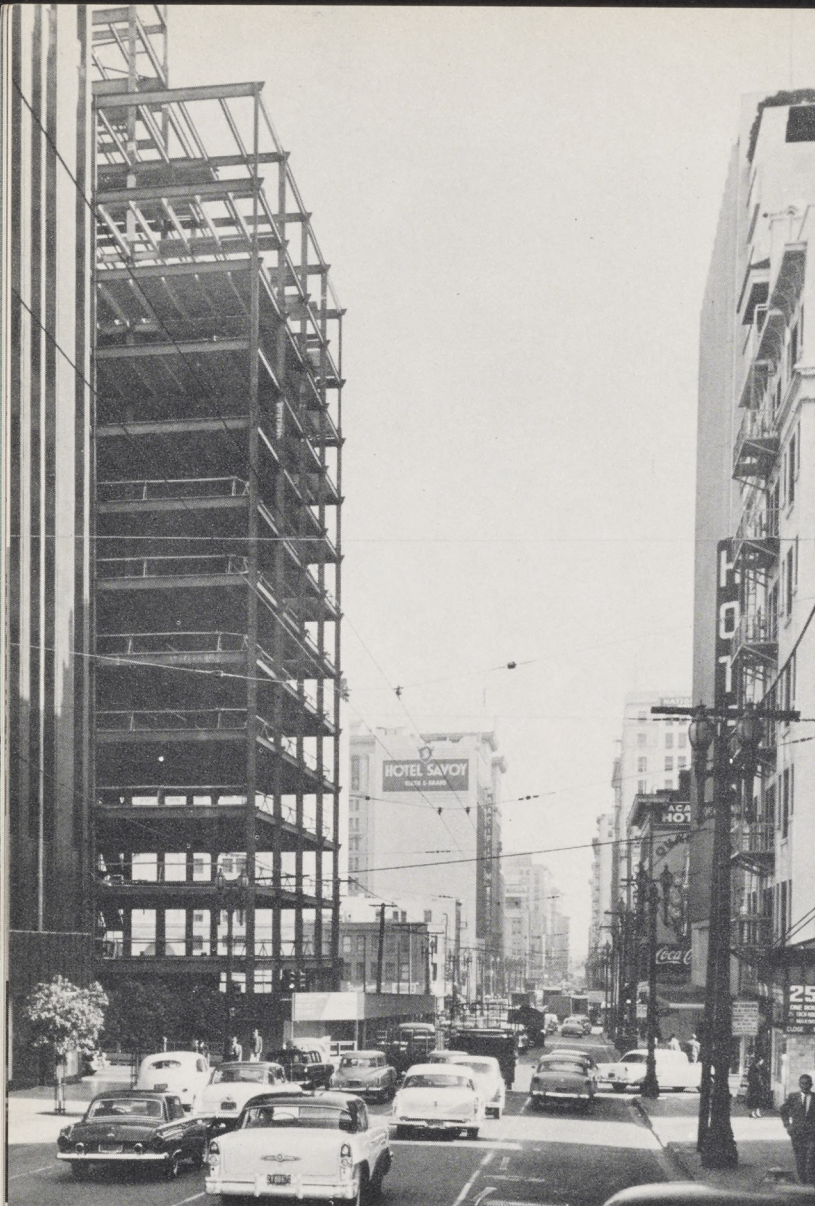
POWER SYSTEM SOURCES AND DISTRIBUTION

Hydroelectric facilities serving Los Angeles include Hoover Dam power plant, the Owens River Gorge power plants, and other power plants principally along the Los Angeles Owens River Aqueduct system. Steam electric generating sources include the Valley Steam Plant, Harbor Steam Plant, and Seal Beach Steam Plant. Energy is transmitted over more than 1400 miles of transmission circuits, including transmission lines extending approximately 266 miles from Hoover Dam and 258 miles from the Owens Gorge. Energy is also transmitted over shorter distances from the Aqueduct power plants and the close-in steam generating plants. The system includes 11 major receiving stations interconnected by transmission lines, 107 distributing stations and over 10,400 miles of sub-transmission and distribution circuits.

LOS ANGELES WATER AND POWER SUPPLY SYSTEMS

To serve the City of Los Angeles, aqueducts and transmission lines cross the mountains and deserts bringing water and electricity from the High Sierra from points as far as 300 miles to the north and from the Colorado River 300 miles to the east. Together with local sources, these supplies help to provide diversity and dependability of water and electric supplies and ample reserve capacity, with alternative routes for delivering water and power to distribution centers. These factors, plus close coordination and integration of facilities in each system, contribute to a high degree of reliability of service by the Department despite varying conditions and changes in demand.





Many large new office structures and other buildings under construction indicate Los Angeles' rapid business and industrial expansion.



Tract developments involving thousands of new homes are helping to meet Los Angeles' housing needs for its rapidly growing population.

PATTERN FOR PROGRESS

..... In Los Angeles, America's Fastest Growing City

In population, in business, in industry, and in all other factors of community growth, Los Angeles in the fiscal year 1955-56 continued its unprecedented pattern for progress. The rapid growth and development of the city has been continuous over many years. Since the World War II period, this expansion has been greatly accelerated, and the record for the year ending June 30, 1956 makes it clear that the rapid rate of progress is being maintained.

Population: Special census counts of the City of Los Angeles made by the United States Census Bureau show an increasing rate of growth. A census taken as of February 25, 1956, gave the city a population of 2,243,901, an increase of 139,238 since a previous special census taken as of September 26, 1953. This is an average gain of 57,600 persons per year — more than in any other U.S. city. Between the regular 1950 census and the special 1953 census there was a gain of 134,305, or 38,400 persons per year. Los Angeles' population gain is therefore accelerating. The city's population as of June 30, 1956 is estimated at approximately 2,266,000, the third largest in the nation.

Paralleling population growth, rapid business and industrial development has taken place in Los Angeles. The recently completed U.S. Census of Manufactures confirmed

that the Los Angeles area is now third in the nation in industry, in terms of value added to products by manufacture.

Other growth factors in the City of Los Angeles are indicated in the following records of increases from June 30, 1955 to June 30, 1956:

Net assessed valuation of secured property — From \$2,886,000,000 to \$3,201,000,000.

Total bank deposits — From \$3,582,000,000 to \$3,707,000,000.

Bank demand debits — From \$59,572,569,000 to \$63,976,727,000.

New building construction — From \$418,955,996 to \$459,906,345.

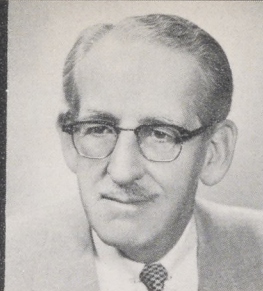
Number of dwelling units — From 787,716 to 809,030.

Industrial expansion — 62 new industries established, 157 existing industries expanded; investment in new and expanded plants, \$117,000,000.

Total employment (Los Angeles metropolitan area) — From 2,281,000 to 2,361,000.

Under long range policies of the Department of Water and Power, water and electric facilities have consistently been built ahead of need, so that ample water and electricity were available to meet the increasing requirements of the city's expanding economy. During the year, the Department invested \$63,920,800 in additions, extensions and improvements to the water and electric systems to assure ample supplies and services for further growth.

FINANCES OF THE DEPARTMENT



FRANK TWOHY
Controller

The 1955-56 fiscal year saw the continuation of the Department's fundamental financial policy of utilizing current revenues to pay all costs of operation and part of the cost of new and expanded water and electric facilities required to keep pace with the continuing growth of Los Angeles. The remaining cost of new construction was financed through issuance of revenue bonds to be retired from future revenues. This sound, consistent policy results in no financial obligation, burden, or restriction on the taxpayers of the city.

As in prior years, all revenues received by the Department were placed in separate revenue funds pertaining to the Water Works and Electric Works, respectively, as required by the city charter. Independent certified public accountants examine balance sheets and related statements of income annually. Copies of their reports on both the Water System and the Power System are available upon request.

The gross income of both Systems for the fiscal year 1955-56 was up from the preceding year, but the increases were more than offset by higher costs. In the Power System, the decrease in net income would have been greater but for the non-recurring item of \$1,160,736 net gain on the sales of land, principally the site for a proposed general office building. Part of the proceeds from those sales was used to acquire substantially all of the site for a proposed general office building in a new location in accordance with a revised Los Angeles Civic Center plan.

From the net income of \$5,830,600 of the Water System, \$1,208,000 was paid to the general fund of the City. From the net income of \$12,890,451 of the Power System, \$3,432,000 was paid into the City's reserve fund. The entire remainder of the net income in each System was required for investment in the System by the retirement of bonds and payment for part of the cost of construction work.

Under the large-scale construction program of the Department, expenditures for additions and extensions totaled \$17,589,168 in the Water System and \$46,331,632 in the Power System. Funds for this purpose were provided from current revenues and from the sale of \$9,000,000 of Water Works Revenue Bonds and \$42,000,000 of Electric Plant Revenue Bonds.

At the end of the 1955-56 fiscal year, the Water System plant and equipment account was \$234,885,510 after deducting \$82,882,472 accumulated provisions for depreciation. Water bonds outstanding amounted to \$88,199,000 of which approximately 28% were general obligation bonds at an average annual interest cost of 4.09% and approximately 72% were revenue bonds with an average annual interest cost of 2.46%. The \$9,000,000 Water Works Revenue 30-year serial bonds, sold in May, 1956, were at an average annual interest cost of 2.94%.

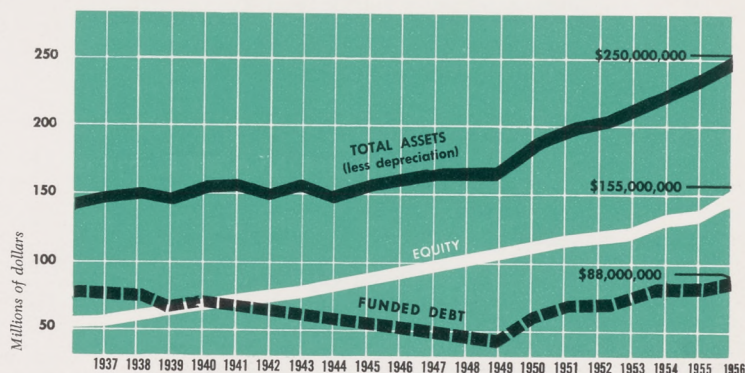
The Power System plant and equipment account was \$466,847,262 after deducting accumulated provisions for depreciation of \$107,114,886. Power bonds outstanding

amounted to \$241,078,000, of which approximately 4% were general obligation bonds at an average annual interest cost of 3.84% and approximately 96% were revenue bonds with an average annual interest cost of 2.34%. Of two issues of Power Revenue 30-year serial bonds, one of \$18,000,000, sold in September, 1955, was at an average annual interest cost of 2.51% and the other of \$24,000,000, sold in February, 1956, was at an average annual interest cost of 2.48%.

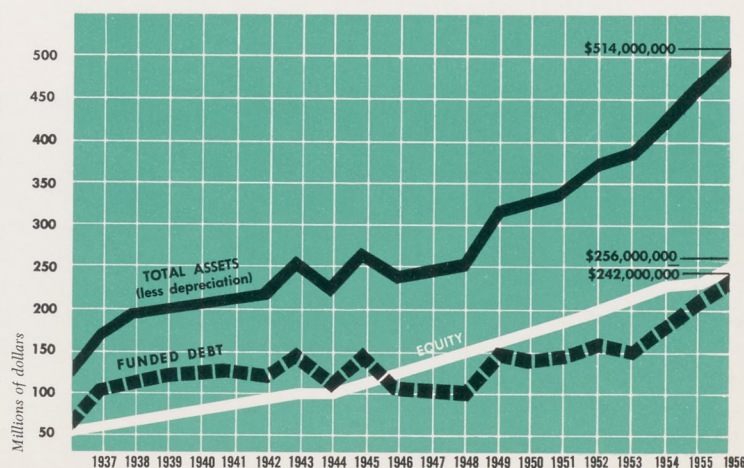
During the fiscal year 1955-56, long range plans for the use of electronic data processing equipment culminated in the formation of a methods group which is completing the programming of a moderate-sized electronic computer for use in payroll and cost work. The machine is scheduled for delivery and operation during the 1956-57 fiscal year.

During the year the Department prepared and issued 349,118 paychecks, prepared and dispatched 95,079 payments for materials and other services, made 8,676,076 regular meter readings, rendered 6,023,266 bills for water or electric service, and maintained 24 district and branch commercial offices and 7 self-service depositories.

WATER SYSTEM



POWER SYSTEM



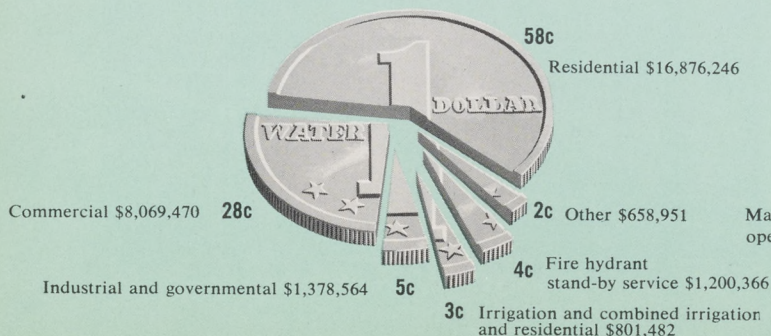
WATER SYSTEM

COMPARATIVE STATEMENTS OF INCOME AND INCOME RETAINED FOR USE IN THE BUSINESS

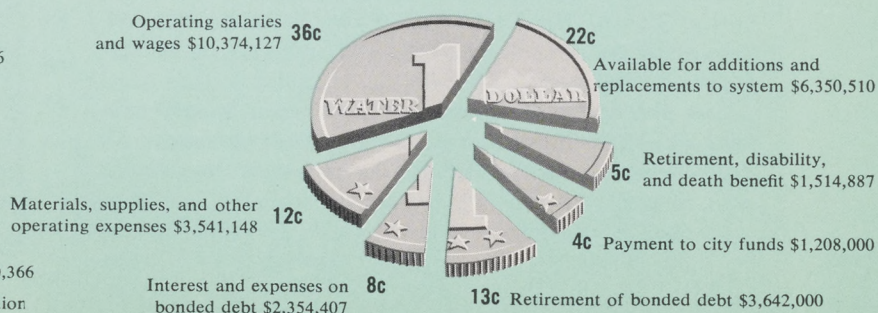
	Year ending June 30	
	1956	1955
OPERATING REVENUE:		
Sales of water —		
Residential	\$16,876,246	\$16,575,202
Commercial and industrial	8,342,284	7,914,870
Other	1,907,232	1,904,994
	<u>\$27,125,762</u>	<u>\$26,395,066</u>
Fire hydrant rentals	1,200,366	1,155,342
Other operating revenue	298,965	265,682
Total operating revenue	<u>\$28,625,093</u>	<u>\$27,816,090</u>
OPERATING EXPENSE:		
Source of supply —		
Dams, reservoirs and aqueduct	\$ 445,571	\$ 424,639
Purchased water	650,567	443,300
Pumping	927,003	946,302
Purification	754,592	757,017
Distribution	1,916,863	1,857,995
Customers accounting and collecting	1,651,237	1,540,040
General	2,216,537	2,144,360
Contribution to the employees' retirement plan funds (not including \$494,224 and \$462,670, charged to plant construction in the respective years)	1,217,010	1,216,563
Total operation	<u>\$ 9,779,380</u>	<u>\$ 9,330,216</u>
Maintenance	4,705,337	4,453,212
Provision for depreciation	5,667,787	5,293,632
Taxes on property outside the City	647,568	569,537
Total operating expense	<u>\$20,800,072</u>	<u>\$19,646,597</u>
Operating income	<u>\$ 7,825,021</u>	<u>\$ 8,169,493</u>
OTHER INCOME — net	359,986	387,772
Income before funded debt expense	<u>\$ 8,185,007</u>	<u>\$ 8,557,265</u>
FUNDED DEBT EXPENSE:		
Interest	\$ 2,428,634	\$ 2,393,307
Amortization of bond expenses	7,773	6,347
Interest charged to construction — credit	(82,000)	(54,000)
	<u>\$ 2,354,407</u>	<u>\$ 2,345,654</u>
Net income for the year	<u>\$ 5,830,600</u>	<u>\$ 6,211,611</u>
INCOME RETAINED FOR USE IN THE BUSINESS AT BEGINNING OF YEAR	91,905,201	85,693,590
INCOME RETAINED FOR USE IN THE BUSINESS AT END OF YEAR	<u>\$97,735,801</u>	<u>\$91,905,201</u>

THE 1955-56 WATER DOLLAR

RECEIPTS — \$28,985,079



EXPENDITURES — \$28,985,079



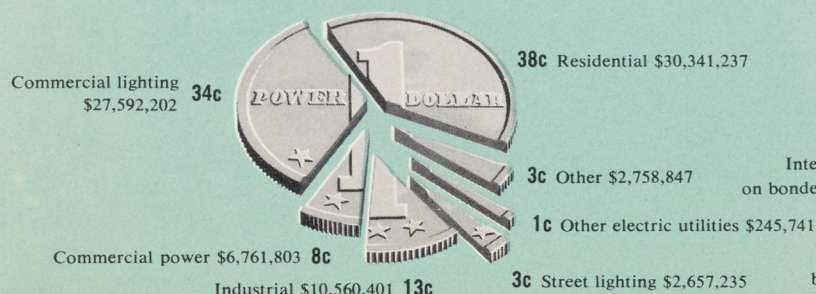
POWER SYSTEM

COMPARATIVE STATEMENTS OF INCOME AND INCOME RETAINED FOR USE IN THE BUSINESS

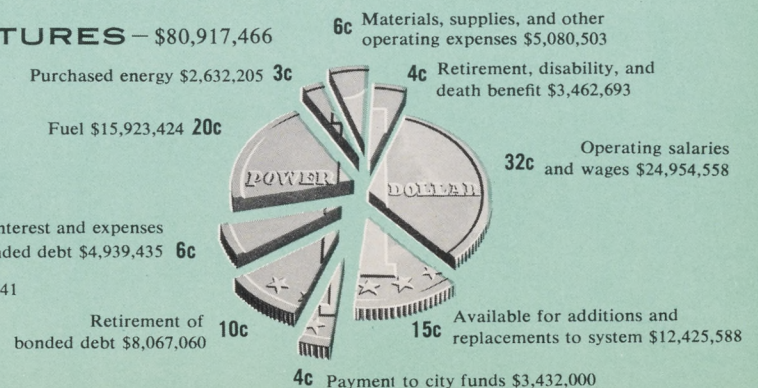
	Year ending June 30	
	1956	1955
OPERATING REVENUE:		
Sales of electric energy —		
Residential	\$ 30,341,237	\$ 28,017,145
Commercial and industrial	44,914,406	40,421,870
Other	3,421,716	3,137,686
	<u>\$ 78,677,359</u>	<u>\$ 71,576,701</u>
Other operating revenue	736,245	571,984
Total operating revenue	<u>\$ 79,413,604</u>	<u>\$ 72,148,685</u>
OPERATING EXPENSE:		
Production —		
Steam electric generation —		
Fuel	\$ 15,923,424	\$ 10,461,558
Other	2,118,788	1,773,337
Hydroelectric generation	483,590	463,174
Purchased energy, largely from Hoover power plant	2,632,205	3,027,568
Transmission	761,530	690,149
Distribution	9,864,879	9,067,993
Customers accounting and collecting	2,871,439	2,838,204
Sales promotion	1,654,320	1,557,413
General	3,795,922	3,557,460
Contribution to the employees' retirement plan funds (not including \$1,369,754 and \$1,347,241, charged to plant construction in the respective years)	2,519,910	2,446,959
Total operation	<u>\$ 42,626,007</u>	<u>\$ 35,883,815</u>
Maintenance	7,809,338	7,412,164
Provision for depreciation	11,976,980	10,846,014
Taxes on property outside the City	675,255	643,054
Total operating expense	<u>\$ 63,087,580</u>	<u>\$ 54,785,047</u>
Operating income	<u>\$ 16,326,024</u>	<u>\$ 17,363,638</u>
OTHER INCOME — net	1,503,862	354,912
Income before funded debt expense	<u>\$ 17,829,886</u>	<u>\$ 17,718,550</u>
FUNDED DEBT EXPENSE:		
Interest	\$ 5,181,534	\$ 4,412,316
Amortization of bond expenses and premiums	328,901	342,528
Interest charged to construction — credit	(571,000)	(639,000)
	<u>\$ 4,939,435</u>	<u>\$ 4,115,844</u>
Net income for the year	<u>\$ 12,890,451</u>	<u>\$ 13,602,706</u>
INCOME RETAINED FOR USE IN THE BUSINESS AT BEGINNING OF YEAR	240,765,796	230,422,090
	<u>\$253,656,247</u>	<u>\$244,024,796</u>
Less — Payments to the reserve fund of the City	3,432,000	3,259,000
INCOME RETAINED FOR USE IN THE BUSINESS AT END OF YEAR	<u>\$250,224,247</u>	<u>\$240,765,796</u>

THE 1955-56 POWER DOLLAR

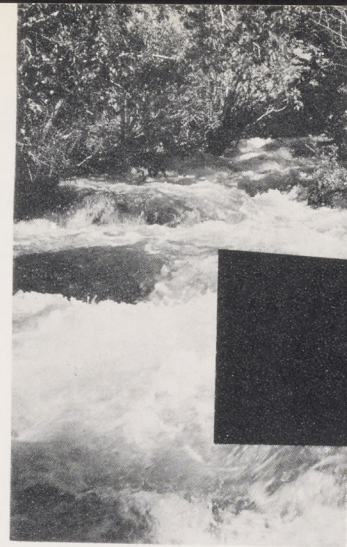
RECEIPTS — \$80,917,466



EXPENDITURES — \$80,917,466



WATER SYSTEM



COMPARATIVE

ASSETS

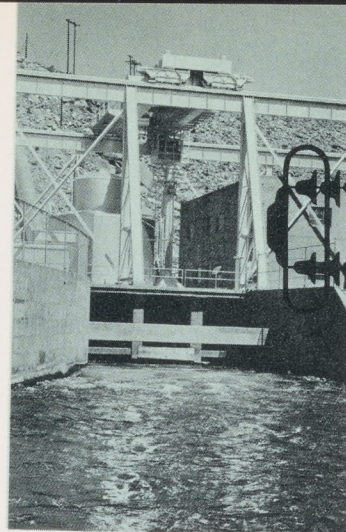
	June 30	
	1956	1955
UTILITY PLANT , at original cost:		
Plant in service, excluding lands	\$275,110,729	\$258,503,208
Less—Accumulated provisions for depreciation	82,882,472	77,996,373
	<u>\$192,228,257</u>	<u>\$180,506,835</u>
Lands	38,515,386	38,399,351
Construction work in progress	4,141,867	4,293,679
	<u>\$234,885,510</u>	<u>\$223,199,865</u>
CONSTRUCTION FUNDS:		
United States Treasury obligations and cash deposited with City Treasurer	\$ 4,000,097	\$ 4,000,000
Less—Amount payable to revenue fund (see below)	4,000,097	4,000,000
	<u>\$ —</u>	<u>\$ —</u>
LONG TERM RECEIVABLE , from Power System of the Department—due in equal monthly instalments to October 1974, plus interest at 4½ %	\$ 833,430	\$ 878,890
BOND REDEMPTION AND INTEREST FUNDS,		
Deposited with City Treasurer	\$ 524,310	\$ 526,724
CURRENT AND WORKING ASSETS:		
Deposits with City Treasurer	\$ 533,077	\$ 1,559,170
Amounts receivable from construction funds (see above)	4,000,097	4,000,000
Cash on hand and revolving funds	265,360	172,295
Customers and miscellaneous accounts receivable, less allowance for losses	2,732,058	2,242,023
Construction, operation and maintenance materials and supplies, at approximate cost	4,571,115	3,721,496
	<u>\$ 12,101,707</u>	<u>\$ 11,694,984</u>
DEFERRED CHARGES:		
Preliminary survey and investigation expenditures	\$ 775,397	\$ 573,154
Deferred stores, shop and miscellaneous expenses	401,309	252,960
Unamortized net bond issue expenses	82,130	66,722
	<u>\$ 1,258,836</u>	<u>\$ 892,836</u>
	<u>\$249,603,793</u>	<u>\$237,193,299</u>

BALANCE SHEETS

LIABILITIES

	June 30	
	1956	1955
FUNDED DEBT:		
General obligation bonds	\$ 24,804,000	\$ 26,596,000
Revenue bonds	63,395,000	56,245,000
	<u>\$ 88,199,000</u>	<u>\$ 82,841,000</u>
Note—Funded debt at June 30, 1956 included \$3,969,000 regular maturities occurring in the succeeding fiscal year and \$36,000 matured but not presented for payment.		
OTHER CURRENT LIABILITIES:		
Accrued interest on bonds, including at June 30, 1956		
\$55,870 matured coupons not presented for payment	\$ 712,991	\$ 716,176
Accounts payable, accrued expenses, payrolls, etc.	2,731,601	3,173,919
Customers' deposits	2,618,819	2,646,175
	<u>\$ 6,063,411</u>	<u>\$ 6,536,270</u>
INVESTMENT FROM PROCEEDS OF GENERAL TAXATION	<u>\$ 5,741,286</u>	<u>\$ 6,949,286</u>
CONTRIBUTIONS IN AID OF CONSTRUCTION	<u>\$ 51,864,295</u>	<u>\$ 48,961,542</u>
INCOME RETAINED FOR USE IN THE BUSINESS	<u>\$ 97,735,801</u>	<u>\$ 91,905,201</u>
PURCHASE COMMITMENTS, for construction contracts and materials, etc.:		
At June 30, 1956 . . . \$1,692,000		
At June 30, 1955 . . . <u>4,544,000</u>		
CONTINGENT LIABILITIES		
Claims and suits arising out of the ownership and operation of the Water System for an aggregate of approximately \$2,800,000 were pending against the Department at June 30, 1956 for damages to persons and property and for other alleged liabilities arising out of matters usually incident to the conduct of such a utility business. Until the pending claims and suits are disposed of, the Department's liability, if any, in these matters cannot be determined and no provision therefor has been made in the accompanying financial statements.		
	<u>\$249,603,793</u>	<u>\$237,193,299</u>

POWER SYSTEM



COMPARATIVE

ASSETS

	June 30	
	1956	1955
UTILITY PLANT , at original cost:		
Plant in service, excluding lands	\$535,209,706	\$469,523,127
Less—Accumulated provisions for depreciation	107,114,886	100,024,721
	\$428,094,820	\$369,498,406
Lands	24,893,325	24,327,369
Construction work in progress	13,859,117	38,400,984
	\$466,847,262	\$432,226,759
CONSTRUCTION FUNDS:		
United States Treasury obligations and cash deposited with City Treasurer	\$ 7,997,379	\$ 7,023,566
Less—Amount payable to revenue fund (see below)	7,997,379	7,023,566
	\$ —	\$ —
BOND REDEMPTION AND INTEREST FUNDS,		
Deposited with City Treasurer	\$ 570,346	\$ 661,580
CURRENT AND WORKING ASSETS:		
Deposits with City Treasurer	\$ 3,315,210	\$ 1,417,861
Amount receivable from construction funds (see above)	7,997,379	7,023,566
Cash on hand and revolving funds	473,983	309,411
Customers and miscellaneous accounts receivable, less allowance for losses	7,497,658	5,826,584
Materials and supplies, at approximate cost:		
Construction, operation and maintenance	12,284,636	11,394,046
Fuel for generation	5,749,379	1,504,321
	\$ 37,318,245	\$ 27,475,789
DEFERRED CHARGES:		
Unamortized bond redemption premiums and net bond issue expenses . . .	\$ 3,496,921	\$ 3,796,030
Advance contributions to employees' retirement fund	—	1,270,007
Advance payment of generating charges for Hoover power plant	2,745,725	3,314,099
Preliminary survey and investigation expenditures	959,466	906,356
Deferred stores, shop and miscellaneous expenses	1,649,505	1,152,280
	\$ 8,851,617	\$ 10,438,772
	\$513,587,470	\$470,802,900

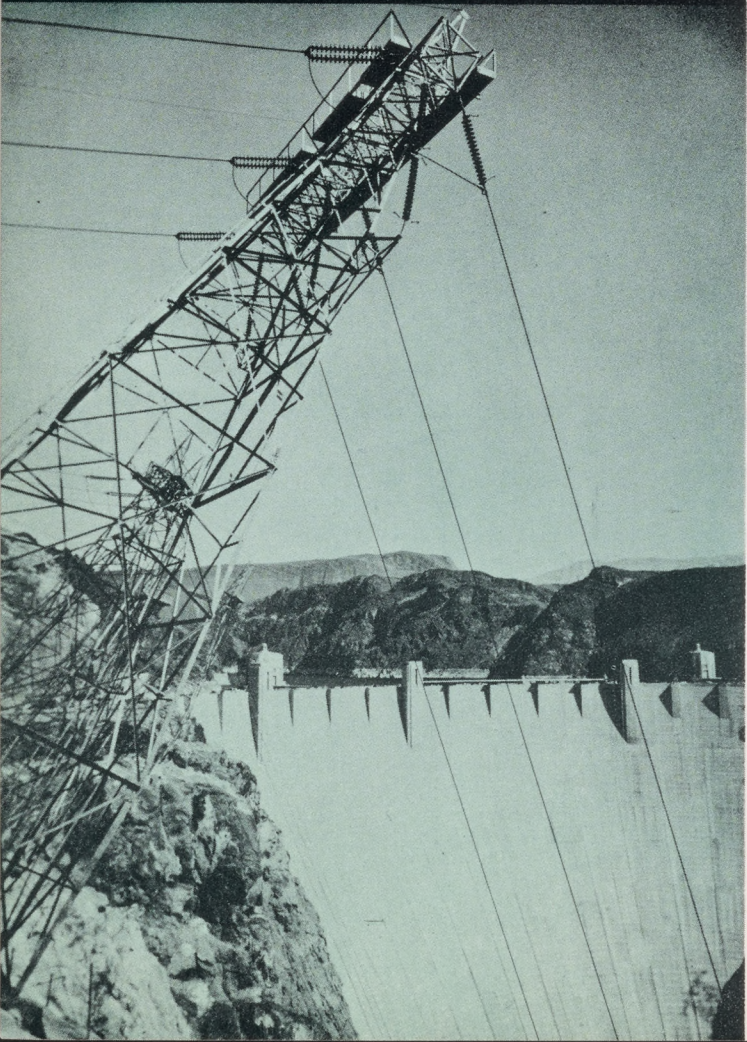
BALANCE SHEETS

LIABILITIES

	June 30	
	1956	1955
FUNDED DEBT:		
General obligation bonds	\$ 10,118,000	\$ 11,174,000
Revenue bonds	230,960,000	195,970,000
Long term obligation to Water System of the Department	833,430	878,890
	<u>\$241,911,430</u>	<u>\$208,022,890</u>
Note—Funded debt at June 30, 1956 included \$9,607,000 regular maturities occurring in the succeeding fiscal year and \$15,000 matured but not presented for payment.		
OTHER CURRENT LIABILITIES:		
Accrued interest on bonds, including at June 30, 1956		
\$87,861 matured coupons not presented for payment	\$ 1,563,845	\$ 1,270,894
Accounts payable, accrued expenses, payrolls, etc.	10,086,316	11,686,063
	<u>\$ 11,650,161</u>	<u>\$ 12,956,957</u>
DEFERRED INCOME,		
Received from cities of Burbank, Glendale and Pasadena for rentals of transmission and other facilities, applicable to future periods	\$ 3,615,760	\$ 3,601,352
CONTRIBUTIONS IN AID OF CONSTRUCTION	<u>\$ 6,185,872</u>	<u>\$ 5,455,905</u>
INCOME RETAINED FOR USE IN THE BUSINESS	<u>\$250,224,247</u>	<u>\$240,765,796</u>
PURCHASE COMMITMENTS, for construction contracts and materials, etc.:		
At June 30, 1956 . . . \$26,572,000		
At June 30, 1955 . . . <u>23,393,000</u>		
CONTINGENT LIABILITIES		
Claims and suits arising out of the ownership and operation of the Power System for an aggregate of approximately \$3,000,000 were pending against the Department at June 30, 1956 for damages to persons and property and for other alleged liabilities arising out of matters usually incident to the conduct of such a utility business. Until the pending claims and suits are disposed of, the Department's liability, if any, in these matters cannot be determined and no provision therefor has been made in the accompanying financial statements.		
	<u>\$513,587,470</u>	<u>\$470,802,900</u>



SALES-1955-56



WATER

REVENUE:	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	
UNITS OF 100 CUBIC FEET SOLD:	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	
AVERAGE BILLING PRICE PER 100 CUBIC FEET:	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	
AVERAGE NUMBER OF CUSTOMERS	
(calculated on number of billings):	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	
AVERAGE ANNUAL CONSUMPTION PER CUSTOMER	
(in units of 100 cubic feet):	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	

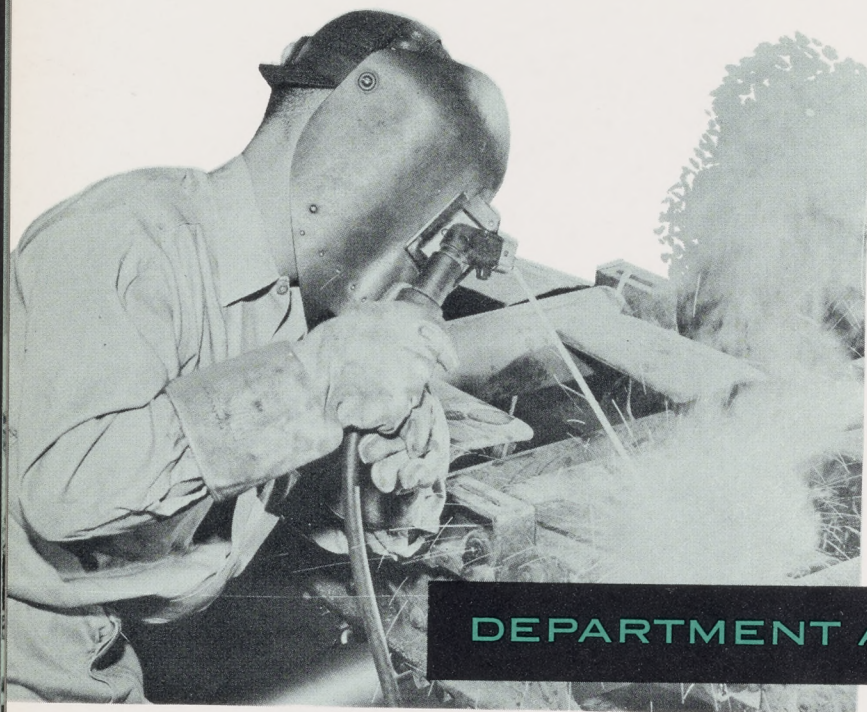
POWER

REVENUE:	
Years ending June 30	
1956	
1955	
Increase	
Per cent increase	
KILOWATT HOURS SOLD:	
Years ending June 30	
1956	
1955	
Increase	
Per cent increase	
AVERAGE BILLING PRICE PER KILOWATT HOUR:	
Years ending June 30	
1956	
1955	
Decrease	
Per cent decrease	
AVERAGE NUMBER OF CUSTOMERS	
(calculated on number of billings):	
Years ending June 30	
1956	
1955	
Increase (decrease)	
Per cent increase (decrease)	
AVERAGE ANNUAL CONSUMPTION PER CUSTOMER	
(in kilowatt hours):	
Years ending June 30	
1956	
1955	
Increase	
Per cent increase	

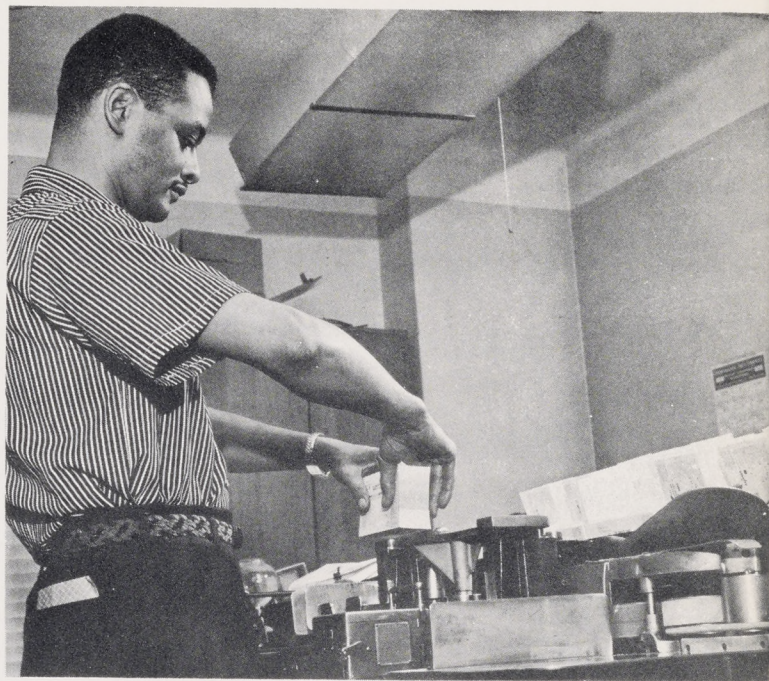
<i>Residential</i>	<i>Commercial</i>	<i>Industrial</i>	<i>Governmental</i>	<i>Intermittent Irrigation</i>	<i>Combined Irrigation and Residential</i>	<i>All Classes Combined</i>
\$16,876,246 16,575,202 \$ 301,044 1.82	\$8,069,470 7,662,645 \$ 406,825 5.31	\$272,814 252,225 \$ 20,589 8.16	\$1,105,750 991,591 \$ 114,159 11.51	\$345,186 405,779 \$(60,593) (14.93)	\$456,296 507,624 \$(51,328) (10.11)	\$27,125,762 26,395,066 \$ 730,696 2.77
89,682,304 88,217,976 1,464,328 1.66	55,653,296 53,306,886 2,346,410 4.40	2,534,940 2,261,931 273,009 12.07	10,718,852 9,355,215 1,363,637 14.58	13,754,422 16,349,440 (2,595,018) (15.87)	3,705,889 4,235,071 (529,182) (12.50)	176,049,703 173,726,519 2,323,184 1.34
\$.1882 .1879 \$.0003 .16	\$.1450 .1437 \$.0013 .90	\$.1076 .1115 \$ (.0039) (3.50)	\$.1032 .1060 \$ (.0028) (2.64)	\$.0251 .0248 \$.0003 1.21	\$.1231 .1199 \$.0032 2.67	\$.1541 .1519 \$.0022 1.45
448,800 436,535 12,265 2.81	63,933 61,522 2,411 3.92	142 154 (12) (7.79)	2,922 2,713 209 7.70	1,000 1,203 (203) (16.87)	6,132 6,687 (555) (8.30)	522,929 508,814 14,115 2.77
200 202 (2) (.99)	870 886 (16) (1.81)	17,852 14,711 3,141 21.35	3,668 3,448 220 6.38	13,754 13,591 163 1.20	604 633 (29) (4.58)	

Average annual consumption per customer, for both Water and Power sales, has been adjusted to recognize the effect of extending the bi-monthly billing procedure to include most Commercial and Industrial customers, effective December 1, 1954.

<i>Residential</i>	<i>Commercial</i>	<i>Industrial</i>	<i>Public Street and Highway Lighting</i>	<i>Department's Water System</i>	<i>Total Except Other Electric Utilities</i>	<i>Other Electric Utilities</i>	<i>All Classes Combined</i>
\$30,341,237 28,017,145 \$ 2,324,092 8.30	\$34,354,005 30,759,132 \$ 3,594,873 11.69	\$10,560,401 9,662,738 \$ 897,663 9.29	\$2,657,235 2,497,937 \$ 159,298 6.38	\$518,740 495,383 \$ 23,357 4.71	\$78,431,618 71,432,335 \$ 6,999,283 9.80	\$245,741 144,366 \$101,375 70.22	\$78,677,359 71,576,701 \$ 7,100,658 9.92
1,465,430,676 1,329,329,923 136,100,753 10.24	2,337,488,746 2,053,408,194 284,080,552 13.83	1,393,696,123 1,242,001,181 151,694,942 12.21	121,038,250 112,514,525 8,523,725 7.58	68,358,224 65,108,018 3,250,206 4.99	5,386,012,019 4,802,361,841 583,650,178 12.15	13,400,344 2,668,603 10,731,741 402.15	5,399,412,363 4,805,030,444 594,381,919 12.37
\$.0207 .0211 \$ (.0004) (1.90)	\$.0147 .0150 \$ (.0003) (2.00)	\$.0076 .0077 \$ (.0001) (1.30)	\$.0220 .0222 \$ (.0002) (.90)	\$.0076 .0076 \$ — —	\$.0146 .0149 \$ (.0003) (2.01)	\$.0183 .0541 \$ (.0358) (66.17)	\$.0146 .0149 \$ (.0003) (2.01)
693,286 670,836 22,450 3.35	124,850 122,234 2,616 2.14	8,938 8,918 20 .22	1,671 1,624 47 2.89	311 305 6 1.97	829,056 803,917 25,139 3.13	2 3 (1) (33.33)	829,058 803,920 25,138 3.13
2,114 1,982 132 6.66	18,722 17,016 1,706 10.03	155,929 139,498 16,431 11.78					



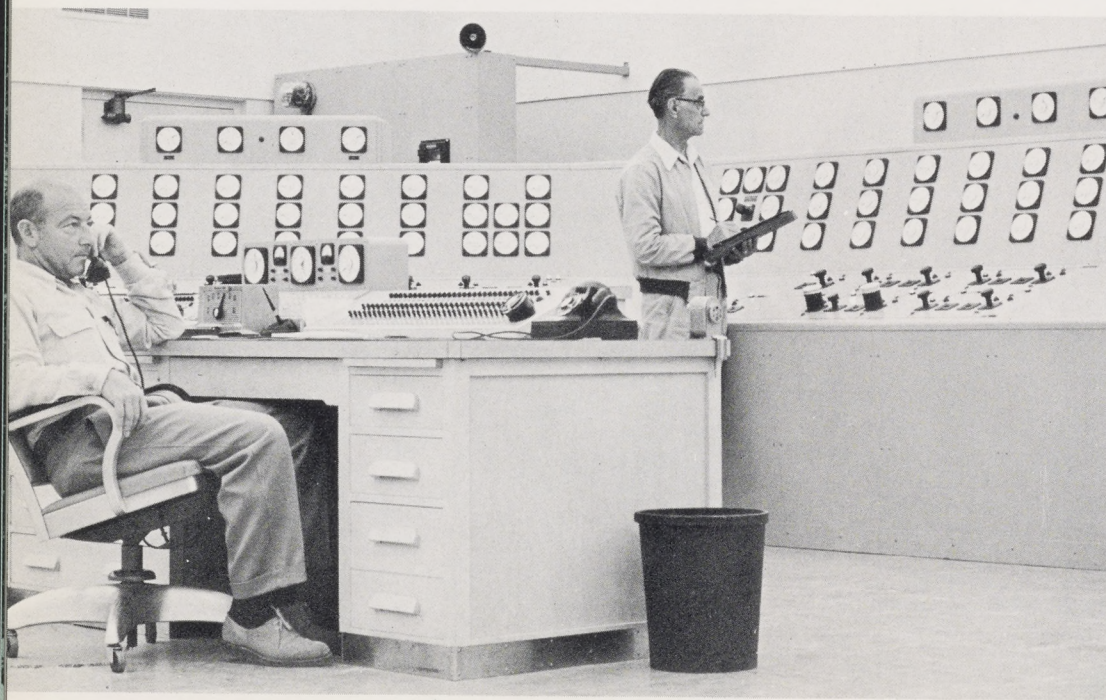
Welder puts finishing touches on repair job.



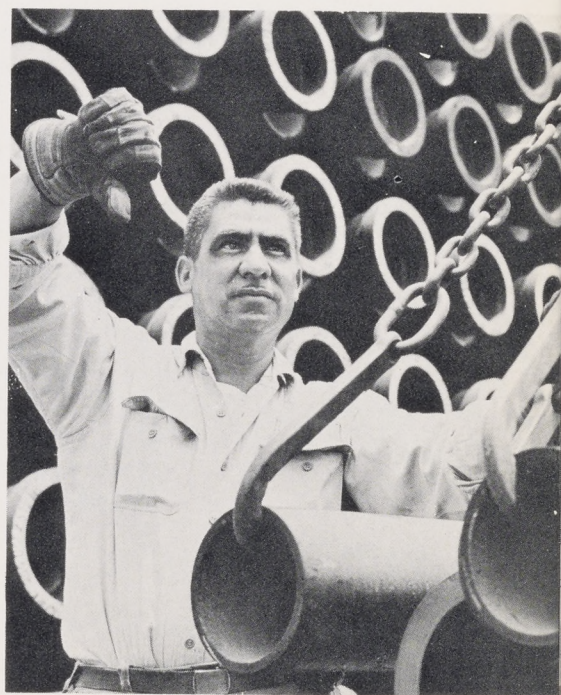
More than a half-million pieces of mail pass through the mailing room every month.

DEPARTMENT AT WORK

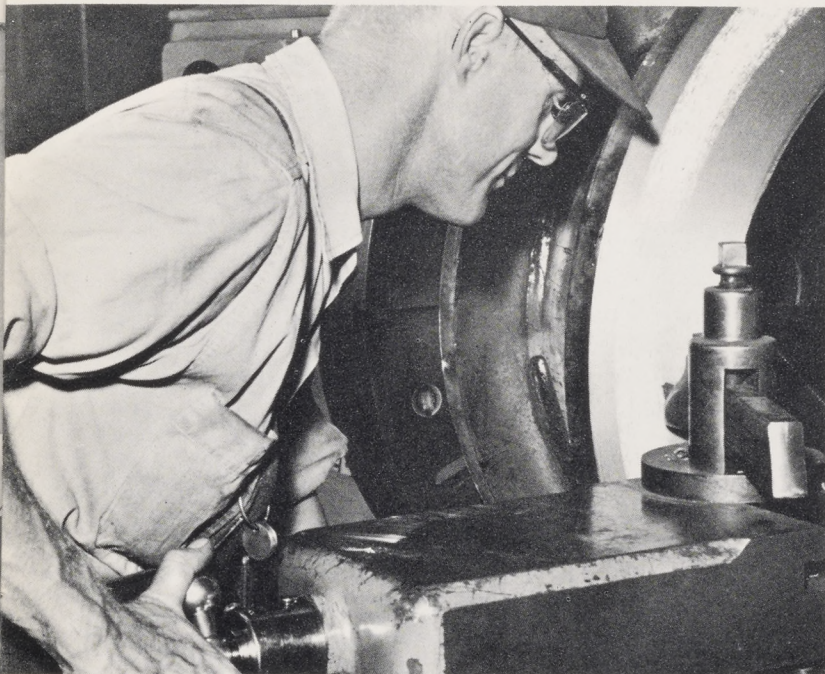
During the 1955-56 fiscal year, an average of 11,176 men and women were employed by the Department of Water and Power to carry on the many tasks necessary to its smooth operation. To keep ample supplies of water and electricity flowing to the people of Los Angeles without interruption day by day throughout the year required the conscientious and loyal services of Department employees with a large variety of skills and experiences. This work continued to be carried out in the highest traditions of the public service.



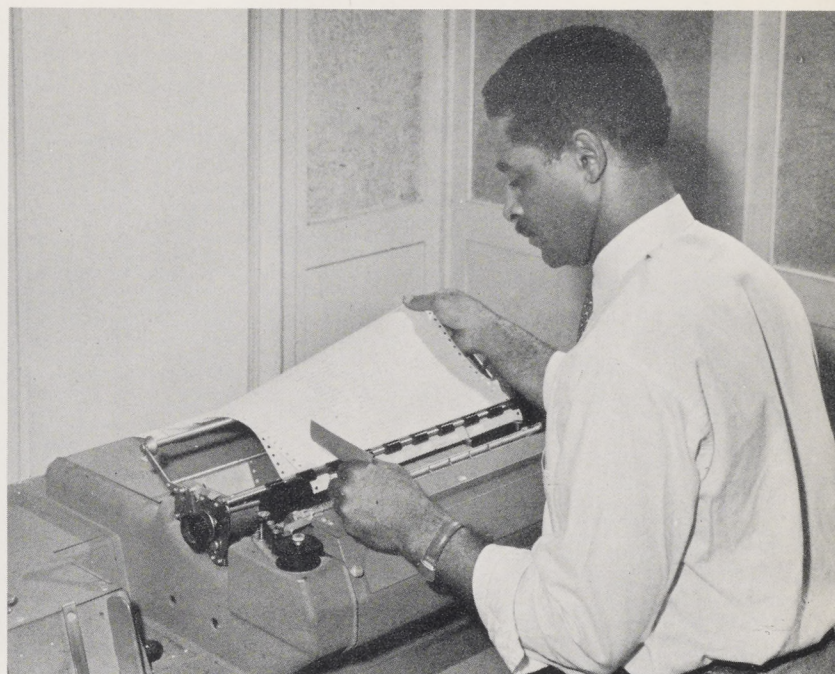
Operators at Receiving Station "K" direct flow of electricity to distributing stations, from where it is fed to business, industry and homes.



Miles of pipe are kept on hand for repair, expansion and improvement of Water System.



Machinist checks work progress on close-tolerance job.



Positive control over accounts is possible through machine bookkeeping.

During the year, Department employees greatly improved their safety record as accident frequency was sharply reduced. Through in-service training and assistance in education, many employees were prepared for advancement. Ideas for improvements were contributed by employees through a suggestion plan system. The Department's Retirement System, mutual benefit programs, and other services aided in maintaining high morale.

Some of the hundreds of kinds of jobs performed are illustrated on these pages.



Clerk in Customer Service Unit makes out order for turn-on of new water and electric services.



Operator checks screen of closed circuit television system at New Valley Steam Plant. Television provides continuous view of flames in furnaces.



Lineman performing maintenance repairs to assure uninterrupted electric service to customers.



Hydrographers chart and direct flow of water from sources to city's distribution system.



Gantry crane at Valley Steam Plant is operated from cab above generator deck.



Boxes containing file data are stored at Inactive Records Center.



Modern electronic devices aid in improving services to customers.

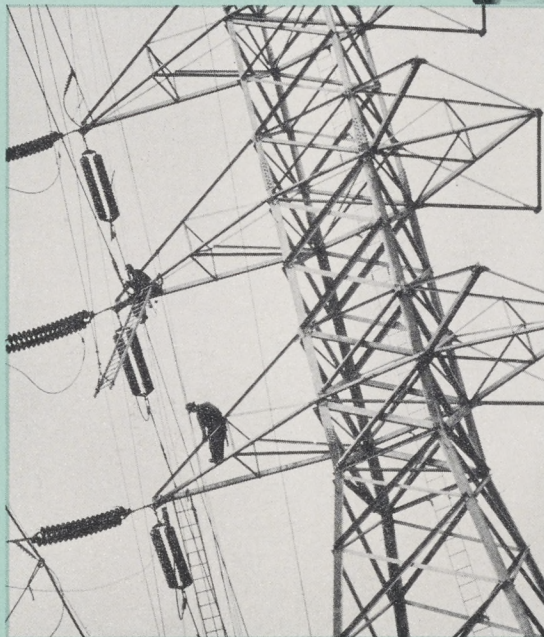


Trained personnel handle customers' accounts, give fast, efficient service.

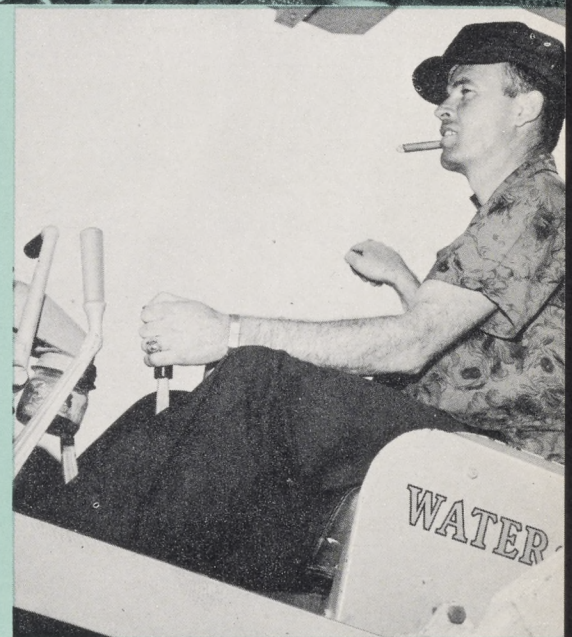
Water meters undergo rigid tests before being installed.



Painter applies protective coat at one of many Department buildings.



Crewmen installing electrical equipment on transmission tower at Sylmar Switching Station.



Heavy duty equipment operator at work on Water System construction project.

PUBLIC SERVICES *of the department*

To assist the citizens of Los Angeles, who are the owners as well as the customers of the Department of Water and Power, many public services are offered by the Department. By encouraging the broadest use of water and electricity, especially under conditions which will result in increased return on existing large investments in water and power facilities, the Department is aided in maintaining high standards of service at lowest possible rates.

Through programs of information the Department makes known to its citizen-owner-customers the services which are available for their benefit, and helps to keep them informed about their Department and its operations.

Through the cooperation of the press, television, and radio, through programs of speaking and motion picture films, publications, exhibits, and educational work with schools, clubs, and civic groups, information is widely disseminated.

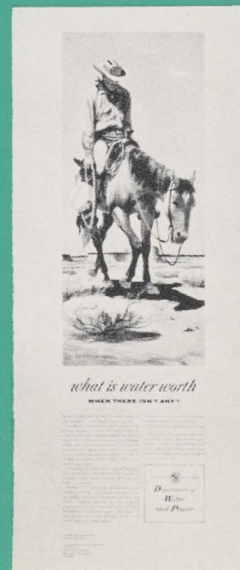
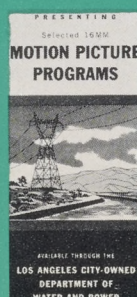
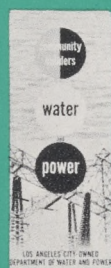
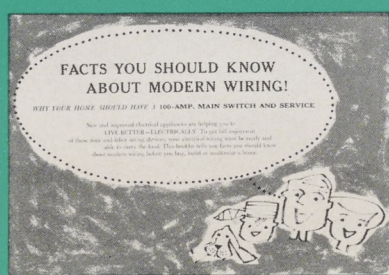
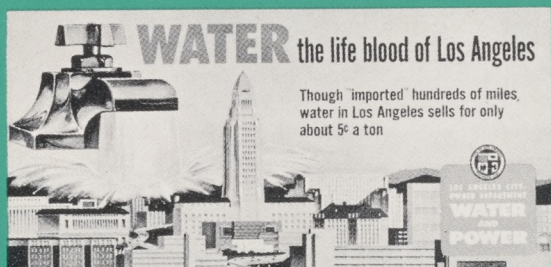
Through Department advertising, sales and service programs are supported and important institutional information is brought to the attention of the public. Encouragement is given to the use of the latest in modern appliances and labor-saving devices, increasing off-peak consumption of electricity, and contributing to economic progress and a high standard of living in Los Angeles. Advertising and other educational work is helping to raise home standards of wiring, making possible better living in accord with modern requirements. Encouragement is given to the installation of more adequate water piping in the home to meet present day increased water requirements. Advertising in metropolitan and community

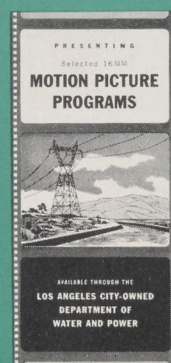
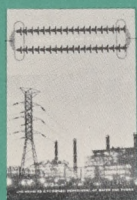
newspapers, streetcars and buses, over television, and in magazines and trade publications, and by direct mail is included in the program.

Department consultants and technicians provide many special services to customers and potential customers who are planning new installations of water and electric services in their homes, businesses and industries. Assistance is given developers in planning water and electricity for new subdivisions. Department experts are called upon to give assistance to customers with many water and electric problems, in response to thousands of requests by telephone, letters, and personal visits.

Advice and assistance is provided to architects, builders, plumbing and electrical contractors, and others who can benefit by applying advanced methods of installation of water and electric services. Department home economists provide educational service to the public in the use of modern electric equipment.

Through the Department's industrial development program, assistance is given in the location of new industries within the city and the expansion of existing factories. In this way, thousands of new job opportunities are created to meet the needs of a growing population and a rising living standard in Los Angeles. Many advisory services are also provided to customers having problems of heating and air conditioning, and assistance is given in applications of electricity in industry and in many commercial uses.





WHT, PR. 0250

Los Angeles
city-owned
Department of
Water and Power

